

AMERICAN FRUIT GROWER

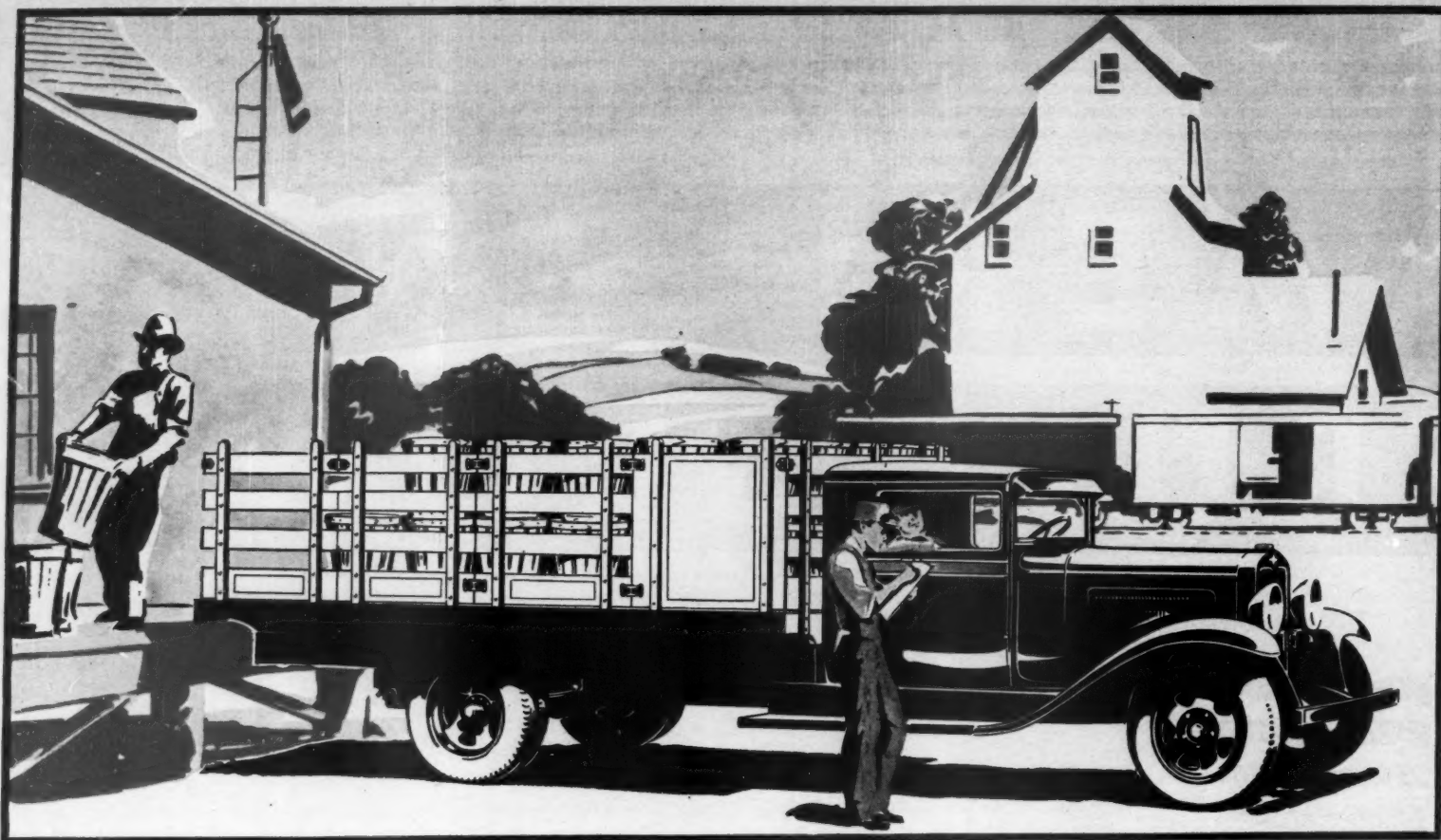
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THE CHERRY GROWER TAKES A-BIGGER PIECE OF PIE . . . Harold Titus
THE MOTOR TRUCK IN THE SMALL FRUIT INDUSTRY . . . Bryce Edwards
CALIFORNIA "CALAVO" GROWS IN FAVOR L. Van Rensselaer
HOW TO BEAT HARD TIMES T. J. Talbert
SUBSTANTIAL GROWTH OF FILBERT INDUSTRY ASSURED . M. Leona Nichols
BEES FOR YOUR ORCHARD E. R. Root

TEN
CENTS
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Illustrated above is the Chevrolet 1 1/2-ton truck on 157-inch wheelbase. Price complete with Chevrolet cab and stake body \$810. Dual wheels standard. Chevrolet also offers a 131-inch model of the same weight capacity priced at \$710, dual wheels optional, \$25 extra.

Chevrolet six-cylinder trucks haul bulky loads at the lowest cost per mile



It's the full-size capacity of Chevrolet trucks—and their ability to handle full-size loads at low cost—that make Chevrolet so well-suited for farm work.

Take the new 157-inch 1 1/2-ton model, for example. The length of the frame, and the adequate support given this length, have made it possible to use a body 12 feet long and 82 inches wide. Dependable, safe hauling, day after day, is assured by a frame 7 inches deep, along with a heavier rear axle, bigger brakes and husky dual wheels. And Chevrolet's 50-horsepower six-cylinder engine supplies ample pulling ability to carry heavy

loads up steep grades, over fields and soft ground.

Owning a truck like this, you can count on years of reliable, efficient transportation. And you can safely expect a minimum of expense for its operation and upkeep. Chevrolet uses less gasoline and oil than any other truck of similar type, and is just as easy on

tires. Chevrolet stays on the job, steadily, with very few lay-ups for adjustments or repairs. And when any service may be required, there is Chevrolet's great organization of 10,000 dealers to take care of you—each one offering Chevrolet's famous service, with its unusually low charges for labor and genuine Chevrolet parts.

**1 1/2-ton chassis
with 157" wheelbase**

\$590

(Dual wheels standard)

**1 1/2-ton chassis
with 131" wheelbase \$520**

(Dual wheels optional, \$25 extra)

Commercial Chassis - \$355

All prices f. o. b. Flint, Mich., and Indianapolis, Ind. Special equipment extra.

CHEVROLET MOTOR COMPANY, DETROIT, MICHIGAN

CHEVROLET SIX CYLINDER TRUCKS

FOR LOWEST TRANSPORTATION COST

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AMERICAN FRUIT GROWER

VOLUME 51

APRIL, 1931

NUMBER 4

CHAIRMAN LEGGE AND THE FARM BOARD

WITH THE RETIREMENT from the Federal Farm Board of its Chairman, Alexander Legge, that body parts with its able pilot. Rugged of build and feature, ready of wit and speech, deep and resonant of voice and of dominating personality, the Chairman imbued the Board with his own qualities from the start.

A farmer among farmers, he succeeded in winning the confidence of the leaders of all farmers' organizations. He looked upon the Federal Farm Board as having been created for just one object—to improve the economic condition of American agriculture. If other interests complained that the course of the Board was inimical to their well-being they received scant sympathy.

Attacks on the policies of the Board brought swift defense and counter-attack from Chairman Legge, and few of even the boldest and most gluttonous for punishment, after one encounter with that able gentleman, willingly returned for a second.

From the outset the Federal Farm Board faced tasks of outstanding proportions. The very law under which it came into being was considered by many to be a political patch-work written in the language of Populism. The Agricultural Marketing Act had few supporters among the leaders of the prosperous and successful farmers' co-operatives. These openly denounced the Act as an atrocity, shoved down their throats in fulfillment of impossible campaign pledges.

Nor were the unsuccessful co-operators enthusiastic. They wanted either subsidies, as expressed in the McNary-Haugen bill, or relief from tariff inequalities, as expressed by the Export Debenture plan.

Under the able direction of Chairman Legge, the successful co-operatives were shown that valuable aid lay within the power of the Board to bestow. They accepted and very generally benefited. The wheat growers were given their subsidy, which took the form of "pegging" the price of wheat. That this plan failed was to have been expected, but the Board went the possible limit in trying the plan, and there is no just ground for complaint that the plan has not at least been given a trial.

By trial and error sound principles are

being evolved, and upon these principles the Board is proceeding to render helpful and enduring aid to agriculture, as a result of which the Federal Farm Board is becoming well established in popular esteem and confidence. Even the plan of "pegging" the price of wheat is more generally looked upon in the light of a necessary though expensive trial of an idea of promise, than as a "failure."

Whether or not the Federal Farm Board would enjoy its present position in the esteem of the public had not the steady hand

of Alexander Legge guided its policies through the days of infancy, is a moot question. If not he, perhaps some other man of the same type would have done it. But men of such outstanding type are not over-plentiful.

THE BROGDEN DECISION

THE CITRUS INDUSTRY will not be required to pay perpetual tribute for the privilege of dipping fruit in a borax solution, according to a recent decision of the highest court of the land.

After two decisions in lower Federal Courts, averse to the fruit industry, the Supreme Court of the United States was induced to review the cases and decide on the question. This in itself is unusual, as the Supreme Court almost invariably limits appeals in patent cases to questions affected by dissimilar decisions of the lower courts of appeal.

The importance of the question at issue, and the influence of the United States Department of Agriculture as well as the same departments in the citrus fruit States, availed to persuade the high court to review the case, with the result that the borax process in blue mold prevention may freely be used.

The credit for freeing the fruit industry from the vassalage of the Brogdex patents must go to the organization which, at its own expense, fought the case through court after court to victory—American Fruit Growers, Incorporated. It may be safe to state that this concern stands to lose nothing by its vigorous championship of the interests of the entire industry.

But the case and its outcome provokes serious thought. Should it be necessary for the fruit industry to depend upon a distributing organization for protective measures? And is it wise or even safe to do so? Might not other cases easily occur in which the interests of the growers would be vitally affected without so materially affecting the distributors? And in such a suppositious case, could the growers look to any distributing organization to fight the battle and foot the bill?

The idea of a national body, representative of and chosen by grower organizations, equipped to advance the interests of the grower as well as to fight his battles, is not without attractions.

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BUSINESS OFFICES

CHICAGO.....53 West Jackson Blvd.
NEW YORK CITY.....6 East 45th St.
CLEVELAND.....Standard Bank Bldg.

HARRY W. WALKER
BUSINESS MANAGER

CHESTER G. CAMPBELL
EDITOR

Associate Editors

T. J. TALBERT

W. C. O'KANE

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Use a Ford Truck this spring

To haul your products to market—to bring supplies back home



LET a Ford truck help you prepare for planting-time . . . bring new machinery out from town . . . haul seed, and feed, and supplies. It can do all of your hauling throughout the year, lending its power and strength to each task. It will work for you many seasons, at low cost, returning value far in excess of its price.

Ford trucks are strongly built, of fine materials, and to strictest standards of excellence in design and workmanship.

For example, more than twenty ball and roller bearings are used at important chassis-points. These serve to reduce friction and wear, to make driving easier and operation smoother, and to prolong the life of the truck.

Other features are the use of forty different kinds of steel for specific purposes,

and the extensive use of fine steel forgings. Simplicity is embodied in every part of the mechanism.

All of these help to increase the reliability, strength, economy, and value offered by Ford trucks . . . assuring long service at a minimum cost of operation and maintenance.

The chassis is available with 131½-inch or 157-inch wheelbase. Equipment which all Ford dealers can supply includes stake sides and cattle-racks, for use on the standard platform body. They may be equipped with either open or closed cabs. Dual rear wheels are available at small additional cost, and there is a choice of high or low rear-axle gear-ratios.

See these trucks at your Ford dealer's. They are low in cost, as a result of Ford manufacturing policy and large production.

FEATURES

of Ford Commercial Units

Four-cylinder, 40-horse-power engine. Torque-tube drive. Internal-expanding mechanical brakes, all fully enclosed. Forty different kinds of steel for specific purposes. Extensive use of fine steel forgings. More than 20 ball and roller bearings. Three different wheelbases. Two different chassis. Triplex shatter-proof windshields. Low first cost. Low cost of operation and maintenance. Reliability and long life. You may purchase a Ford truck or light commercial car on convenient, economical terms through the Authorized Ford Finance Plans of the Universal Credit Company.



THE CHERRY GROWER TAKES A BIGGER PIECE OF PIE

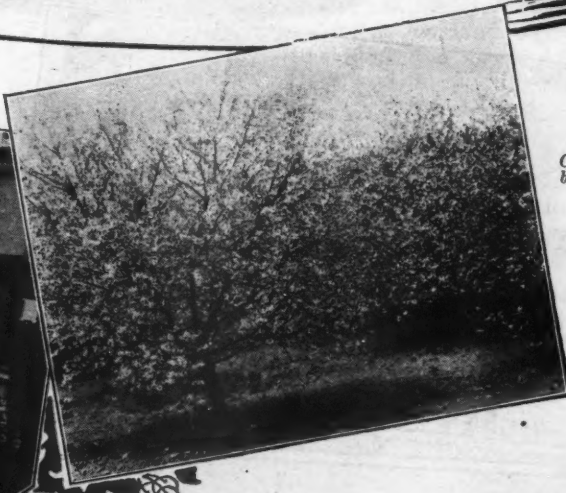
By HAROLD TITUS

HAVING come through their first year of co-operatively marketing grower-canned cherries—one of the worst years ever experienced by foodstuffs industries—with not only organization heads but the rank and file of growers well satisfied with results, Wisconsin and Michigan cherry growers are laying plans for expansion in this, the second year of their joint effort.

The venture, made possible by the terms of the Agricultural Marketing Act, is one of the most spectacular in the history of American horticulture and already promises to be used as a precedent by the producers of other fruits.

Before 1930, the Door County Fruit Growers' Union of Wisconsin was the only manufacturing co-operative in the cherry industry. As a matter of fact, it was the only organization in the country of consequence among cherry growers. It owned its own factory, its own storage and had behind it over 20 years of experience which had been satisfactory enough to Badger State growers to control 75 per cent of the cherry tonnage produced in Door county.

Production had been increasing to a point where many growers were becoming alarmed at prospects for the future. What exploitation work had been done among consumers was, for the most part, sporadic and without plan. Particularly



Cherry orchard in bloom, Sturgeon Bay, Wis.



"The Cherry Hut" operated by the Michigan Cherry Growers and Fruit Growers' Union on Lake Street, Chicago.

Keeping three fair pickers busy harvesting the crop.

Interior view of canning factory of Fruit Growers' Canning Co., Sturgeon Bay, Wis.

Interior of freezing plant, Michigan Cherry Growers, Traverse City, Mich.

in Michigan, where the possible cherry acreage is large, was alarm felt. Contracts with canners were mostly written on a sliding scale with a three-dollar-and-a-half spread. This meant that the canner took three and a half dollars from the price of every hundredweight of processed cherries; this represented his costs and his profits; the grower got the rest. So, if cherries were selling for \$9 per dozen No. 10 cans—which requires, roughly, 100 pounds of raw fruit—the grower would receive five and a half cents per pound. If cherries went to \$7, he could hope for no more than three and a half cents a pound.

In other words, the Michigan growers began to feel that they were in the canners' hands, that the canner was not stirring himself sufficiently to assure the growers' future and that, maybe, the grower had better look ahead for himself.

So Michigan Cherry Growers, Inc., was formed among the cherry raisers of the Traverse City district. It was a paper organization, with many enthusiastic members but no assets of any sort. What to do and how

[Please turn to Page 19]

BEES FOR YOUR ORCHARD

By E. R. ROOT

"YOUR BEES are no good in my orchard. I have tried them and I couldn't see that my crop was any bigger than when I didn't have bees. Besides I have heard that bees sting peaches, eat grapes and scatter fire blight." This is a serious challenge and should be met in the spirit of candor.

I have traveled thousands of miles through orchard districts in California, Oregon, in the Middle West, in the East, through the famous Shenandoah Valley that has produced as high as 3,000,000 barrels of apples in one year. I have likewise gone through the New England orchards. It is surprising how many fruit growers that I have interviewed give expressions similar to that given above. Some of them number their orchards by the hundred acres. Their trees are carefully trimmed and sprayed. The growers are up-to-date in everything except that they are lamentably uninformed on some fundamentals of

pollination. Some don't even know what the word means, and most of them don't know that there are conditions in an orchard where bees could be of little or no value. Small wonder that some growers have come to the conclusion that "bees are no good and in the way."

I shall attempt to explain what conditions should prevail when bees can make an appreciable showing in more and better fruit. Surely bees should not be blamed for what the orchardists and the beekeepers alike have failed to do toward supplying conditions whereby they can do their work, provided, of course,

that weather conditions are right.

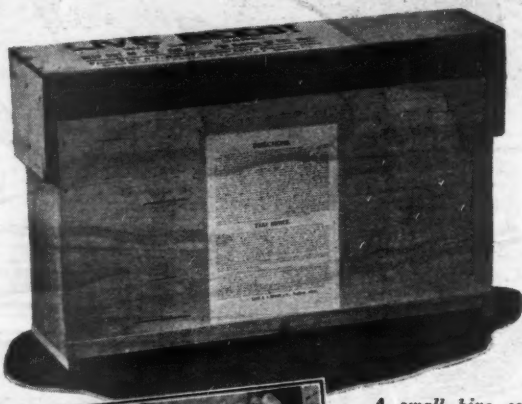
The first and important condition which should prevail to insure proper pollination is in having hives fairly boiling over with bees. That means colonies strong enough to cover completely every comb of a 10-frame standard hive. There should be brood in at least five of the combs.

For years beekeepers, largely because they didn't know any better, have been in some cases supplying orchardists with colonies just as they came out of winter quarters, with only bees enough to cover perhaps three combs with a little scattering brood. Such colonies are so weak that what bees there are must stay in the hive to take care of and hover the brood, leaving few, if any, flying bees to go to the trees. Of course, it goes without saying that such colonies, no matter if all other favorable conditions were present, would be almost worthless.

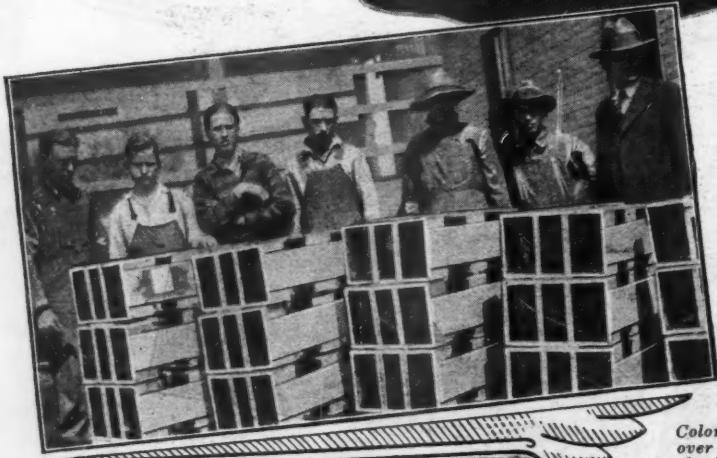
Again, there should be as many strong colonies as there are acres of trees in their prime. In a young orchard of 10-year-old trees, one-half of this number might be sufficient.

So far the bee man has been to blame for supplying colonies too weak in bees. From now on the orchardist should have a guarantee of strong colonies, and they can be strong if the bee man knows how to winter the bees, giving plenty of stores and winter packing. To prove that the specification of strength has been met, the orchardist should require that the bee man open up at random colonies here and there that he has brought. Make him display all the combs covered with bees. Such bees as I describe should be well worth a rental of \$5 per colony during the time when the trees are in bloom. A colony with

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A small hive containing five pounds of bees.



In the absence of bees in the neighborhood, three and five-pound packages can be shipped in from the South. The packages should be wrapped in paper before placing in the orchard.

Colonies wintered over in an orchard should be in double-walled, packed hives. A windbreak of spaced boards should be provided.

Sometimes groups of hives are placed under one tree, but it is better to scatter the hives.



It is a mistake to put all the bees in one corner of the orchard. They should be scattered—one colony to the acre to get good results in cool weather.



Mount Shasta in
northern Cali-
fornia.

CALIFORNIA'S WONDERLAND, MEXICO'S OLD WORLD WITCHERY...

All to be seen on the
AMERICAN FRUIT GROWER
Escorted All-Expense Wonder Tour
July 18-August 3, 1931

LAST MONTH we left the happy trail of the AMERICAN FRUIT GROWER 16-day Wonder Tour at Portland, Ore. One of the three wonderlands to be visited has been seen and marvelled at. The other two, comprising colorful California and romantic old Mexico, remain on the itinerary. Here's

what awaits you, in detail. Judge for yourself if it isn't a grand climax to a wonderful tour—one you can't afford to miss—three wonderlands in one trip.

At Portland, the party changes to the Southern Pacific Railroad (almost the entire journey from Chicago has been via The Milwaukee Road), and proceeds on to Grant's Pass or Glendale, thence to Oakland and San Francisco, Calif.

At Grant's Pass we are in the heart of the Rogue River district, which includes an area of 2300 square miles. The Rogue River Valley is best known for its record-making orchards of pears, peaches, apples and grapes; pears particularly are shipped by the thousands of carloads annually to world markets. A short trip to this renowned orchard land

is included in the Wonder Tour itinerary.

Then on to Oakland—where immediately upon arrival, we shall proceed on a scenic trip including the attractions of Oakland, Berkeley, San Francisco Bay, Piedmont, the University of California, Memorial Stadium and the famous Oakland Sky Line Boulevard. Then comes a short, delightful trip across the bay to San Francisco, where we lunch at a San Francisco hotel. The afternoon is yours to do as you please.

San Francisco proper is surrounded on the east and north by the magnificent Bay and on the west by the Pacific Ocean. Let's look at San Francisco from the Ferry Building on Market Street, the city's main artery. Adja- Please turn
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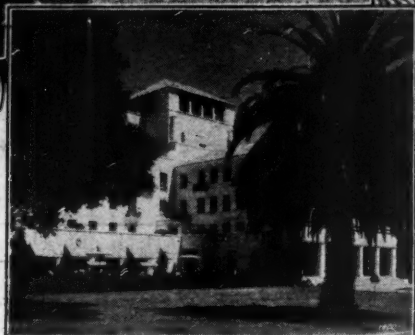


"Horticultural gold" in Cali-
fornia citrus groves.

What irrigation
does for California
citrus growers.



The beach near
Venice and
Ocean Park,
Calif.



Hotel Del Monte,
San Francisco.



THE MOTOR TRUCK IN THE SMALL FRUIT INDUSTRY

By BRYCE EDWARDS

STRAWBERRIES have been trucked longer distances in large volume than any other fruit or vegetable. Proof of this is seen in unloads reported in New York City in 1929, when 64 carload equivalents arrived from North Carolina. Part of these were trucked to the auction market from the Horry county district of South Carolina. From the South Carolina producing fields to New York City is well over 700 miles. This is equal to a haul from New Orleans to Saint Louis, or from central Mississippi to Chicago. In striking contrast is the New Albany, Ind., strawberry area, where up to 1929 none of the berries were shipped by truck.

In Delaware and the Eastern Shores of Maryland and Virginia, 2995 carload equivalents were shipped by truck in 1928 as compared to 2031 cars by rail, or approximately 60 per cent of total shipments by truck. These figures were compiled from actual counts as reported to Delaware State police by truck drivers. The destinations of these berries, in part, were

reported by truck drivers as being: Philadelphia, 899 cars; New York City, 918 cars; Boston, 71 cars; New Haven, nine cars; Providence, five cars; Newark, 227 cars. A score of smaller markets in Pennsylvania and New Jersey were given as destinations.

These figures show that in the East truck movements of berries are very large and distribution is over long distances. Approximately 92 per cent went to the cities listed above, together with Baltimore and Washington, D. C. Berries do not seem to be well suited to merchant

truckman activity in small places.

The extent of motor truck distribution of raspberries, blackberries, and grapes is large in percentage and over relatively long distances. This class of produce, together with stone fruits, seems to be especially adaptable for truck transportation.

Truck shipping of strawberries has reached its highest development in the Atlantic Coastal Plain from the Carolinas north, in Michigan, and the Far Southwest.

Good roads have been available much longer in the East, and greater individual initiative has been shown in trucking. In the Middle West connecting through-roads have only been completed in the past few years, and some are not yet completed. With the exception of Michigan, the movement did not get a good start until about 1927. The years 1928 and 1929 witnessed the advent of the truck for long distance hauling into many new commercial growing areas. The movement has recently been increasing rapidly both in volume and distance hauled, which would seem to indi-

The motor truck is particularly well suited to the profitable marketing of grapes.

The crop of this 30-acre orchard is marketed via the motor truck route.

Benton Harbor (Mich.) boasts the largest fruit market in the world, made possible by the motor truck.

Below. — New Jersey peaches secure "home-grown" prices in Albany, N. Y.



A motorized fruit and produce market.
Lower left.—Loading at dusk, this truckload will bring the best price on the metropolitan market 200 miles distant the next morning.

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THE CALIFORNIA "CALAVO" GROWS IN FAVOR

By L. VAN RENSSELAER

DEVELOPMENTS in the cultivation of the avocado in southern California, as well as in other parts of the country, promise to put it on the fruitstands of every city in the country. Seedlings from Mexico and Guatemala have been cultivated, budded, and topworked until an excellent fruit of uniform quality has been produced. The California growers call their fruit the calavo to distinguish it from the enormous quantity of fruit indiscriminately sold under the names avocado and alligator pear. The California fruit is tested for maturity and guaranteed when it is put on the market. As it has been developed under scientific cultivation in southern California, it is distinct from fruit produced elsewhere.

The fruit belongs to the botanical family *Persea Americana*, the same to which the laurel tree, the California bay tree, the camphor tree, and the cinnamon tree belong. There are three main varieties of this family, two of which thrive in southern California—the Guatemalan and the Mexican. The third, the West Indian, requires a more tropical climate. The Guatemalan yields the best commercial varieties, though some of them come from the ranks of the Mexican. The Fuerte, which is the only variety given unqualified recommendation as a commercial fruit, is a hybrid of the two. Several other varieties have been developed, among them the Nabal, Puebla, Queen and Taft, all candidates for commercial rating.

There are, belonging to the two California families, some 400 varieties of named fruit, and an unlimited variety of unnamed. Many of these are worthless except for experimental purposes. Out of all this conglomerate mixture, it has been necessary, by patient selection and test, to segregate the varieties which are valuable commercially by reason of their flavor, productiveness, reliability, shipping qualities, ease of production, etc. While the Fuerte is the leading variety, commercially, and there are several other commercial candidates of varying degrees of excellency, future experiments may produce something far superior to anything now known.

This experimental work is being carried on constantly. The California Avocado Association, a purely cultural organization, is leading in the work and its variety committee studies all new varieties carefully. Old varieties are discarded, new ones sift towards the top of the list, and improvements are being made all the time.



A calavo grove scene.

A Fuerte calavo, the best on the market.

Picking calavos in a 12 to 15-year old grove.



A seedling calavo tree in southern California, about 35 years old and about 50 feet high, which is still growing.

There are as yet no orchards in California old enough to be fully matured. Many of the early orchards planted have been top-worked over to other varieties because

the first varieties planted proved unsuccessful. New orchards are being planted and while commercially the industry has reached a firm business foundation, and bearing orchards will supply all the fruit that can be disposed of, undoubtedly there will be many new developments in the next few years. Thus, it is not possible now for anyone to give any definite

statistical data on acreage, production, the best fruit or the best methods of cultivation—it is all constantly changing and improving, which is one of the charms of the industry.

In general, this fruit is similar to the citrus fruits in its climatic requirements. The Mexican sorts can be grown where the or-



The fruit packed for shipment in half-lugs.

ange thrives, while the more tender Guatemalan sorts are adapted to the milder districts best suited to lemon growing. The commercial plantings are located in California in two more or less clearly defined districts. The first is strictly coastal, embracing Ventura, Santa

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HOW TO BEAT HARD TIMES

By T. J. TALBERT

DURING HARD TIMES the personal or man factor plays the most important role. This is particularly true in the successful production of horticultural crops. The man factor may far exceed the difference between varieties on account of price or yield; in fact, it generally means the difference between success and failure.

What is this personal or man factor? It is the industry, vision, integrity, and old-fashioned thrift combined with other sterling qualities that go a long way toward guaranteeing success in any project or undertaking. Moreover, it is the ability of one fruit or truck grower to bring order out of chaos and as a result profitable returns from his horticultural operations. On the other hand, the man lacking this personal factor may be able to eke out only a bare existence.

For example, at conservative estimates, the man who has developed the personal factor of being up-to-date, aggressive, and capable in his work may make annual net returns from his apple orchard from \$150 to \$250 per acre. His less energetic neighbor, living on the same kind of land and under practically the same conditions but who refuses to think and knows everything already, may be hardly able to pay taxes and meet current obligations.

Ways to Improve

The fruit, vegetable, or truck grower who has an objective, a goal, or a desire to excel is likely to succeed. It is rare, indeed, to find one who has advanced beyond his desire, who rises higher than he thinks he can, or who always finds the going suited to his liking.

Whether the objective may be the best apple orchard, the most profitable vineyard, or a productive truck crop, it is important that the producer keep his eyes open and his chief interest centered upon the outcome. Of equal rank to this is the importance of letting nothing sidetrack his efforts to put into operation the best known cultural practices and methods adaptable to local conditions.

Without a doubt every producer receives in the beginning and through his progress of development many temporary setbacks. Discouragements may hinder progress greatly. The time may come when you will feel like giving up in despair and saying, "What's the use?" This is the signal for you to reorganize your forces, redouble your efforts, and strengthen your determination to possess that at which you have aimed. Such a spirit is unconquerable. It will help the producer to beat the hard times.

Horticulture Requires Precision Methods

Horticultural production is to agriculture what automobile manufacturing is to mechanics. It is a task calling for precision methods. There is no place in the growing of vegetables, truck crops, or fruit for the rule of thumb and guess work

profitable way. There never was a time when it would seem more important that producers generally extend themselves in an effort to produce more economically and profitably. This calls for head work as well as muscle work. A proper combination of these elements is important in our effort to beat the hard times.

Home Gardening Will Help

The home vegetable garden may be made an important asset to the farm, suburban, or city dweller. Moreover, it offers one of the most valuable means of effecting savings in the family budget. Too many persons make excuses for not raising vegetables and truck crops. It is often considered a trivial matter, and some believe that they can better afford to buy the vegetables needed than to go to the trouble of producing them. The tendency, however, is to not purchase fresh vegetables daily but to do without them and to substitute the more expensive and less wholesome canned or preserved products.

A well kept garden will yield very profitable returns for the time and labor expended. Experiments conducted by the Missouri Agricultural Experiment Station from 1919 to 1921 inclusive from a garden containing one-fourth of an acre gave an annual net return of \$134.14. This garden paid \$1.79 per hour for the labor required. The net returns from another garden containing one-twentieth of an acre was \$47.28, and for the labor expended this garden paid \$1.63 per hour.

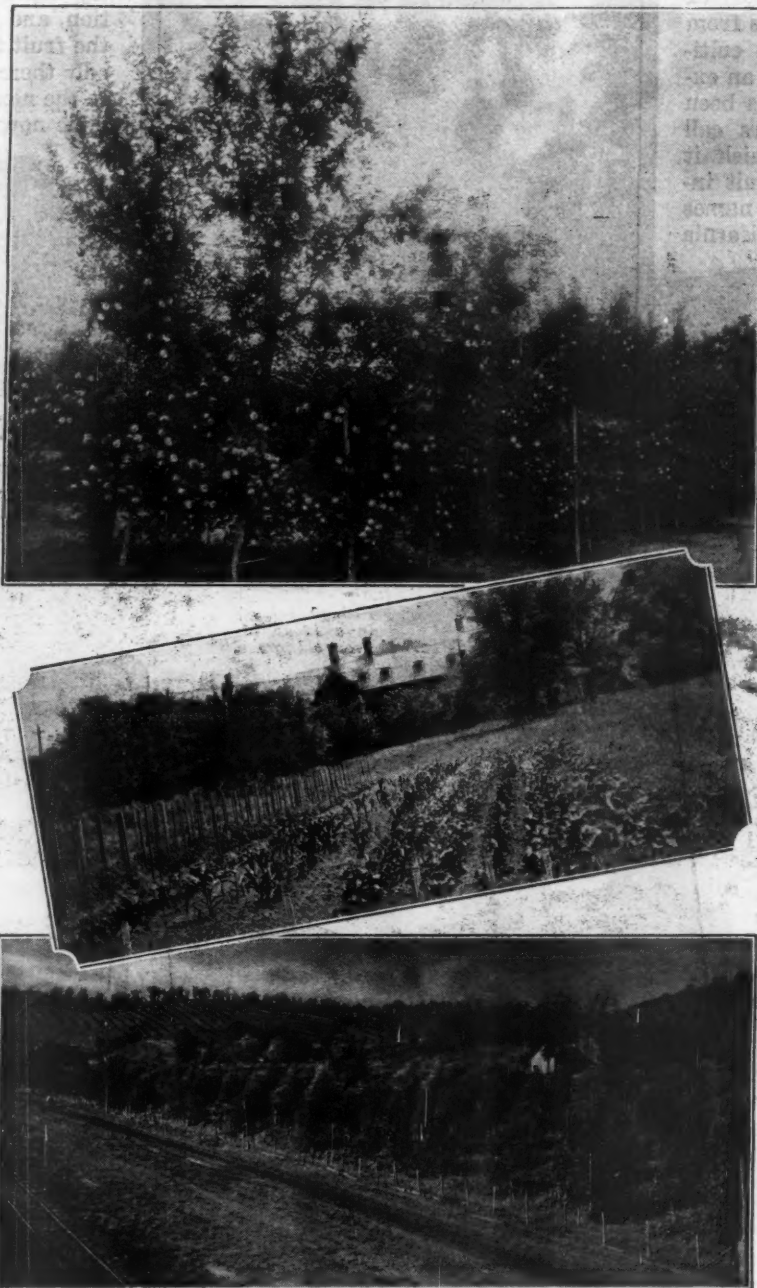
Vegetables also are important from the standpoint of health and growth. Recent investigations have shown that they contain an abundance of mineral salts not found so plentifully in other foods. Growth and health-producing substances known as vitamins are found in ample amounts in most of our common vegetables.

The growing of a vegetable garden may be justified for the following reasons: (1) It can be made to furnish an adequate supply of fresh vegetables from early spring until late autumn, and, in addition, all that are required for canning, preserving, and storage for winter use. (2) It supplies vegetables of high quality. (3) Intelligently planned and carried out, the work becomes a source of education and inspiration instead of drudgery and disappointment. (4) It is a paying proposition in dollars and cents.

Can All You Can Can

Through the growing of vegetables, truck crops, and

[Please turn to Page 24]



Top—Apples in a profitable home orchard. Apples, pears, peaches and strawberries on the same farm producing profitable crops.
Center—A profitable home garden.

methods. It is obvious that the manufacturer cannot leave out part of an automobile and have the machine function properly. Quality and quantity of output that spells success in the growing of horticultural crops cannot be procured through slipshod and haphazard procedure.

Although horticultural crops require precision methods for successful production, yet these practices are not so difficult or intricate that they cannot be learned and practiced successfully by the average producer. A little time and effort on the part of the grower, conscientiously and earnestly applied, will usually fit him eminently for the growing of these crops in a

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Truck Value

never known before

4-5½ TON RANGE

\$2690

Model T-55—four wheelbases; wide range of tire options. 19,000 pounds, Straight Rating (total gross weight including load). Price, 155 in. wheelbase chassis only, f. o. b. Pontiac, Mich.



WHEN you can buy a big, powerful, speedy, yet economical truck of General Motors Truck reputation—at a price \$2000 under the average price of 59 other trucks in its capacity range—that's VALUE!

It is VALUE assured by a famous name, by vast engineering and manufacturing resource. Value made possible by lower material costs and production economies.

Here is VALUE that means additional profit to the Fruit and Produce Grower—more dollars in the bank at the end of the year, through lower trucking costs—maximum hauling efficiency at minimum expense of operation.

This is VALUE that places real heavy duty truck performance within easy reach of every Fruit or Produce Grower; the decided

advantages of larger loads, greater speed, ready-to-go dependability, power to travel anywhere.

It is the T-55, new member of the big, complete General Motors Truck family. Powered by the famous General Motors Truck heavy duty engine; 94 actual horsepower. Six cylinders—for smooth, swift operation over paved highways or powerful pull in the tough spots roads do not reach.

Full-floating rear axle, double reduction type, with malleable iron housing. Big, sturdy, 9-inch frame (3½-inch flanges) of pressed steel 9-32 of an inch thick. Strong cross members (5 or 6, depending on wheelbase). Exclusive GMT stress absorber at point of greatest frame stress.

Loads ride easily on 50-inch,

11-leaf main rear springs and 35-inch, 7-leaf auxiliary springs. Front springs are 40-inch, 12-leaf. All springs are semi-elliptic; silico-manganese steel.

Four-speed transmission; big, powerful 4-wheel brakes; roller bearing worm type steering gear. Safe, easy handling is assured.

Throughout, a truck ideally suited to the strenuous requirements of orchard and farm. An especially worthy member of the General Motors Truck line.

See this and other General Motors Trucks. Drive them. Get a thorough demonstration in your own work. Learn—first hand—what values they are, what splendid performers.

Today—telephone your nearest General Motors Truck branch, distributor or dealer.

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GENERAL MOTORS TRUCK COMPANY, Pontiac, Michigan. (Subsidiary of Yellow Truck & Coach Mfg. Co.)
GENERAL MOTORS TRUCKS, YELLOW CABS and COACHES. Factory Branches, Distributors, Dealers—in over 2200 principal cities and towns. (Time payments financed through our own Yellow Manufacturing Acceptance Corp. at lowest available rates.)

SUBSTANTIAL GROWTH OF FILBERT INDUSTRY ASSURED

By M. LEONA NICHOLS

TO FELIX GILLETTE, an early day nurseryman in the West, belongs the honor of introducing into the Pacific Northwest, the first filbert tree. The United States government encouraged him in making a trip to Europe to study conditions and bring back those fruits and nuts which he thought would be suitable to the western country.

This frontiersman brought his shipment to Nevada City, Calif., established a nursery and from his parent stock the initial plantings were made on the Pacific Coast. Some of the original trees are still producing.

Although there are only a few filbert varieties from which either the commercial grower or the small producer may make selections, there are varieties which are satisfactory both in yield and quality. Of these the Barcelona heads the list, but it must be planted with pollinating varieties in order to insure a full crop. The varieties which have proved most suitable for this purpose are the White Aveline, the Du

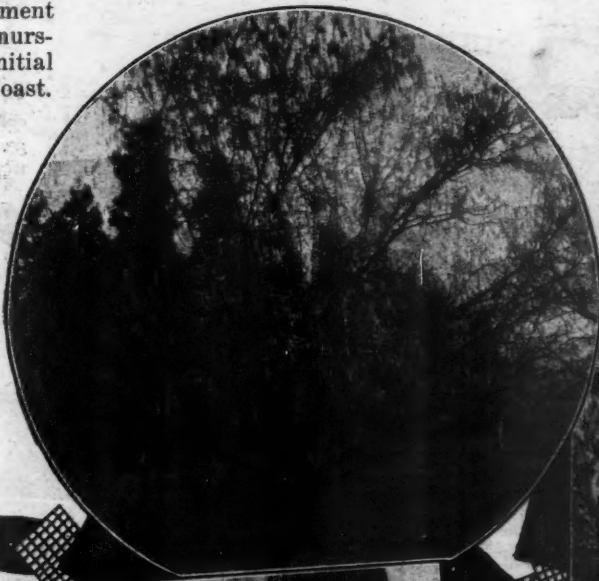
wild hazel, which was believed to be the true test of a proper filbert country, Mr. Dorris proved that filberts would grow in many localities which were not generally believed to be conducive to filbert production.

A point in the filbert's favor is that freezing winter weather, even zero temperature,

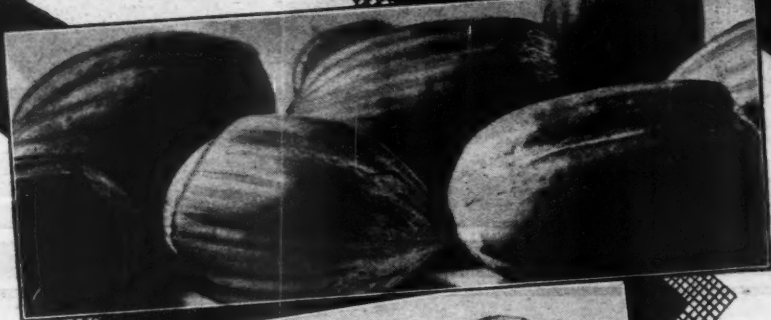
suitable for the growing of filberts, it is but logical to predict that in the near future sufficient orchards will be planted to supply the growing demand for this popular nut. Statistics show that the United States imports annually from 20 to 30 million pounds of filberts. These come from the Old World and are not fresh stock when they arrive, since it is not possible to harvest and prepare them for shipment in time for the holiday season of the same year.

About 80 per cent of the filbert importation into this country is used in the making of confections and 20 per cent is consumed during the holidays. The filbert is ever a popular nut with the children and is not generally considered difficult of digestion.

The life of a filbert tree is often more



Twenty-five-year old Barcelona tree showing catkin development.



Du Chilli filberts.



Barcelona filberts.



Fifteen-year-old Daviana tree on filbert farm of George A. Dorris, Springfield, Ore.



M. Myers' three-year old filbert orchard, Beaverton, Ore.

Chilli, the Clackamas and the Daviana.

George Dorris, a large commercial filbert grower, living at Springfield, Ore., has made a long series of pollination experiments and in his section of the country the Daviana is the most successful pollinizer for the Barcelona. In his orchards are trees of this variety 28 years old and their average yield is 95 pounds. Mr. Dorris is an authority on filbert growing and has been in the business more than a quarter of a century. He has one of the finest filbert orchards in the Northwest. In spite of the fact that the surrounding hills produced no

does not apparently affect the fertilization of its catkins. Examination of catkins taken from trees in freezing and thawing weather has shown that they were uninjured by the variable temperature.

Many Localities Suited to Filbert Production

Since the soil and climate of the United States in many localities are generally

than two centuries. In England there are numbers of trees which have been producing that length of time and yet average a ton of nuts per acre. In this country trees much younger yield about 1000 pounds per acre, and statistics give yields amounting to 4000 pounds per acre for trees about 20 years old.

April, 1931

Compare are easy thinning, a crop after neither b If an ear before the remain un blanket a be as mar been gathe ripe in the

A. M. C living at veloped a which bea that he h which is this can b of expense eliminated, cessful filb ment of a If suckers are yet gre the tree is ightly spr they are sm other reason they reduc growth of t vitality are to develop.

A carefu prove how the filbert t sprouts to trees which filberts wh dropped th when sprou The next se fully watch were remov the original labor was increased y

Filbert tr 2) to 25 fe ample room planting m dozen years nuts will b ighter.

Fall is th for establish though in s cannot get ground and Because of planted in t retards the t localities wh leaves early time for fa show more

Deep plan vocated, sinc the roots wit sary to keep summer. O that the you mound, in t hole, and th about eight i The earth around the m for the first system has o trees are six all probabl pounds of n

One well c Pacific Nor pounds of n trees. Many claimed bu authentic.

The futur gives brite larity of th demand for ple and if fresher and comparison year old wh but reasona preference w fresher artic

Compared to fruit crops, filberts are easy to produce, they require no thinning, seldom any spraying and the crop after it is grown is affected neither by moisture nor freezing. If an early snow catches the nuts before they are harvested, they will remain uninjured under their snowy blanket and in the spring they will be as marketable as though they had been gathered as soon as they were ripe in the autumn.

A. M. Gray, a grower of filberts, living at Milwaukie, Ore., has developed a system of propagation which bears his name. He believes that he has produced a filbert tree which is practically sproutless. If this can be done, then another item of expense in filbert growing has been eliminated, since the aim of all successful filbert growers is the development of a smooth bodied filbert tree. If suckers are not removed while they are yet green and tender, the body of the tree is scarred, but if these unsightly sprouts are taken off when they are small, no scar remains. Another reason for their removal is that they reduce the productivity and growth of the tree, since strength and vitality are wasted by allowing them to develop.

A careful test has been made to prove how much the development of the filbert tree is affected by allowing sprouts to remain. A half acre of trees which produced 2200 pounds of filberts when properly cared for, dropped their yield to 1100 pounds when sprouts were left undisturbed. The next season suckering was carefully watched and all of these sprouts were removed, the yield came back to the original amount and the cost of labor was more than repaid in the increased yield.

Filbert trees should be planted from 20 to 25 feet apart, since this gives ample room for development. Closer planting may yield heavier for a dozen years but after that time the nuts will be smaller and the yield lighter.

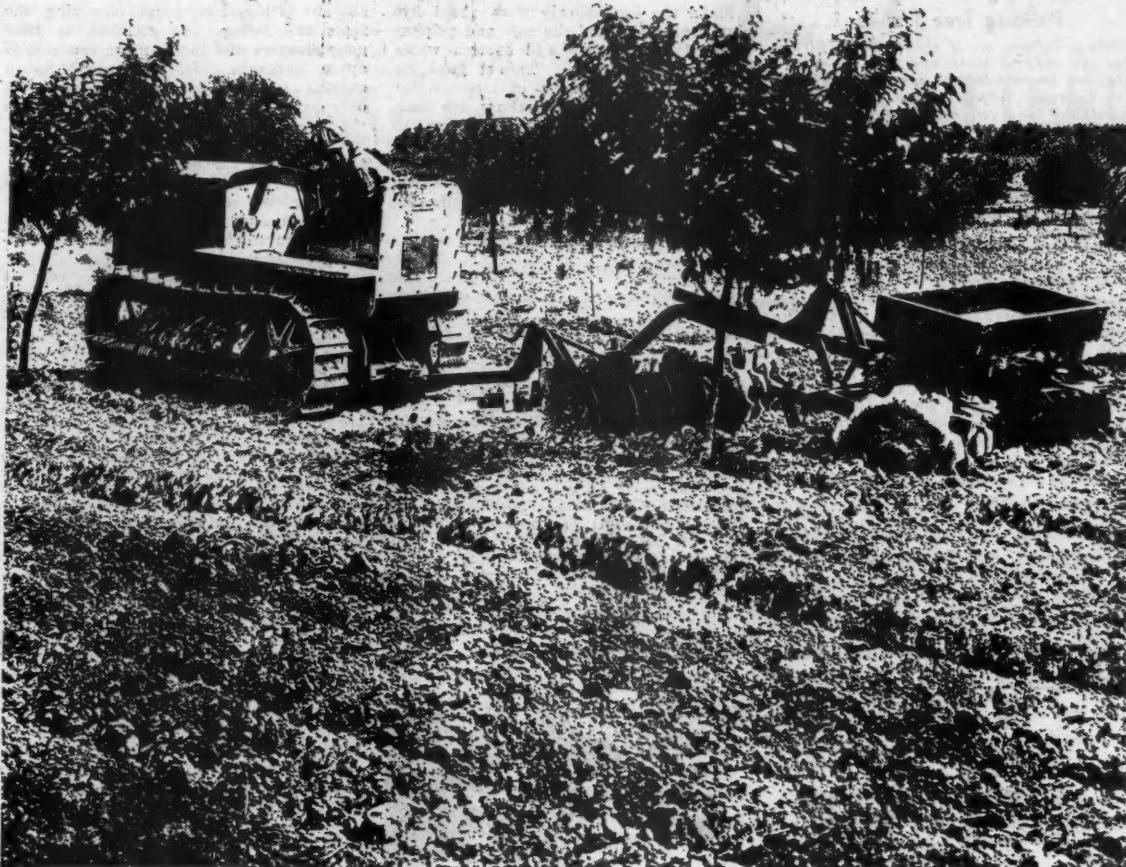
Fall is the most satisfactory time for establishing a filbert orchard, although in some seasons nurserymen cannot get their stock out of the ground and ready for fall shipment. Because of this more filberts are planted in the spring. This, however, retards the tree's growth and in those localities where the filbert drops its leaves early enough to be removed in time for fall plantations, trees will show more growth the next season.

Deep planting of filberts is not advocated, since it is better not to cover the roots with more soil than is necessary to keep them moist during the summer. One authority recommends that the young trees be planted on a mound, in the bottom of a shallow hole, and that the roots be placed about eight inches below ground level. The earth should be well packed around the roots and the tree staked for the first year. If a good root system has developed by the time the trees are six years old, they will in all probability produce about 500 pounds of nuts per acre.

One well established orchard in the Pacific Northwest produces 3200 pounds of nuts from 400 six-year-old trees. Many larger yields have been claimed but the figures mentioned are authentic.

The future of the filbert industry gives bright promise, since the popularity of this nut insures continued demand for it by the American people and if home grown nuts are fresher and of superior quality, in comparison to those which are one year old when imported, then it is but reasonable to suppose that the preference would naturally be for the fresher article.

JUST WATCH



THE TREES FILE BY

WHERE sharp blades must cultivate close to tender trunks—where narrow headlands offer scant room for turning—even there it's easy to tend the orchard right with a "Caterpillar" Tractor.

For a flick of your wrist at the handy steering levers guides heavy implements at will—work as close as you want to, safely. And at row-ends, just a light, steady tug turns this tractor "on its heel." Each track drives through a big, strong steering clutch. Merely releasing one clutch sends the full power through the other—response is quick and sure.

Both broad tracks have positive traction at all times—on all soils. No skids or side-slips—the pull is steady.

Take a bee-line down rows—ziz-zag accurately—make hair-pin turns. You'll enjoy yourself from the easy seat—watching the trees file by.

Caterpillar Tractor Co.

PEORIA, ILLINOIS, U. S. A.

Track-type Tractors Combines Road Machinery
(There's a "Caterpillar" Dealer Near You)

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CATERPILLAR TRACTOR CO., PEORIA, ILL.
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Gentlemen: Can I use a "Caterpillar" track-type Tractor profitably on my farm? Size of farm _____

Chief crop _____

Power now used _____

Name _____

Address _____

QUESTIONS AND COMMENT

Conducted by T. J. TALBERT

Questions on fruit growing problems and on general horticulture will be answered through this department if of general interest. For reply by mail enclose 2c stamped envelope (air mail 5c). Address AMERICAN FRUIT GROWER, 53 West Jackson Blvd., Chicago.

Painting Tree Trunks

Please inform me if the enclosed formulas are safe to wash one and two-year-old fruit trees. I have seen these formulas in some magazine and I thought I would try them on my 1000 fruit trees, but I do not know what to do as I think they might kill or injure the young trees. Please advise.

Peach tree wash to prevent attacks of borers and other insects: 1 gal. lime, ½ lb. flour, ½ pt. crude carbolic acid, 2 gal. lime-sulphur.

Apple tree wash to prevent gnawing animals such as field mice, rabbits, etc.: ½ lbs. yellow ochre, 4 lbs. flour, 4 lbs. linseed oil, 4 oz. asafetida, ½ doz. eggs.

Orchard whitewash: ½ bu. lime, 1 lb. salt, ½ lb. sulphate of zinc, 2 qts. sweet milk.

Please let me know which is O. K. and which is not.—G. M., Delaware.

It is possible that none of the formulas which you give would be injurious to the bark of the trunks of fruit trees. To be on the safe side, however, it is suggested that you make use of only the Orchard Whitewash.

Just as durable a whitewash, however, may be made for the painting of tree trunks, barns, and fences, according to the following formula:

Quicklime 5 lbs.
Salt ½ lb.
Sulphur ¼ lb.

Slake the lime slowly with about five pints water and add the salt and sulphur while it is boiling. Add enough water to make a good wash. This is good for whitewashing the bodies of trees in the fall. In localities where there are deer, this whitewash is not recommended, as the deer are said to be attracted by the salt it contains and injure the trees.

The so-called Government Whitewash may be made according to the following formula:

Quicklime 40 lbs.
Salt 15 lbs.
Rice flour 3 lbs.
Spanish Whiting ½ lb.
Glue 1 lb.
Water 5 gal.

Spraying Apple Trees

I have a number of different varieties of apple trees which are healthy in bark but they do not bear very well and when they do, the apples are knotty and rotten. The trees have been sprayed some. What is this trouble and what would you advise me to do? The apples rot at the core and fall off before their time. There does not seem to be any kind of bug or worm working on the fruit.—C. R., Indiana.

From the description which you give of your apple trees, we believe that on

account of a lack of proper spraying, the fruit and foliage are attacked by fungous diseases and insect pests common to apple orchards. In all probability a careful schedule of spraying will not only protect the foliage and tend to keep the trees healthier, and more vigorous, but you will at the same time be able to produce clean, profitable fruit.

As regards to the matter of sprays and spraying, we suggest that you write to your own Agricultural Experiment Station, Department of Horticulture, at Lafayette, Ind., for publications dealing with spraying. By so doing you will receive information on spraying which is particularly applicable to Indiana conditions.

No Dormant Sprays Necessary

I have a small orchard which was sprayed with lime-sulphur last fall after the leaves fell. There is no indication of scale but do you consider it advisable to use the lime-sulphur spray this spring while the trees are dormant? Please send any pamphlets you may have on spraying, what to use and how often.—A. E. R., Michigan.

If the trees in your small orchard show no indication of an attack of San Jose scale, it is suggested that you omit the dormant sprays this year. While this application will do no harm to the trees, yet in your case its use will not justify the expense of material and time involved for the good that will be accomplished by it.

For full information relative to the application of the dormant spray as well as summer sprays, it is suggested that you write to your own Agricultural Experiment Station, Department of Horticulture, East Lansing, Michigan.

Peach Propagation

I have some two-year-old peach tree roots on which I would like to graft some one-year-old wood. I would like to know what is the best time of the year to do grafting.—E. H. S., Michigan.

Fruit growers and nurserymen generally are agreed that the best results are obtained in the propagation of the peach by budding rather than through the method of whip and tongue grafting by using the peach root and peach scion as you suggest.

The two-year-old peach tree roots may be set in a nursery row about eight to twelve inches apart in the row and three and one half to four feet apart between the rows. Give good cultivation up until the latter part of July or early August, at

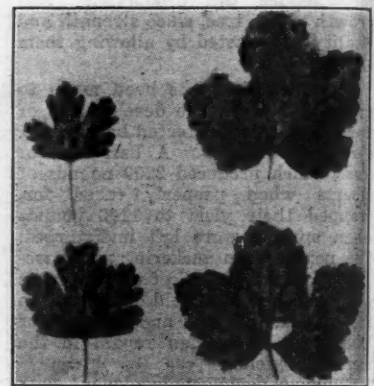
seedling is removed just above the inserted bud, which is forced to grow in the spring by the prompt removal of suckers and shoots which may arise. After one season's growth, the budded stock is generally satisfactory for sale or transplanting.

Leaf Spot of Currants

The leaves on my currants have yellow and red blotches. Have used Bordeaux but this does not seem to help much. What do you advise?

Several cartons of Bordeaux became caked and of a dark color. Can it be used?—F. C., Illinois.

The description of the foliage of your currant bushes indicates an attack by a fungous disease known as leaf spot. It is suggested that you revise your spray-



Leaf spot from anthracnose.

ing schedule with Bordeaux, perhaps by applying the sprays earlier and at shorter intervals so as to keep the foliage thoroughly covered, as this may assist in a better control of the malady.

The cartons of Bordeaux which have become slightly damaged will in all probability be satisfactory for spraying purposes this season. As a matter of caution, however, it might be well to try out small quantity to a limited extent and note whether or not injury occurs before making extensive application.

Slag as a Fertilizer

I have heard much about slag as a fertilizer. My five-acre orchard of Stark's Delicious, Golden Delicious and Stayman Winesap, etc., trees, set out 14 years ago, just does not seem to get into bearing, although nothing has been left undone to get it there. Don't know what is wrong. Thought I would try some slag for fertilizer.—M. C. P., Illinois.

You no doubt refer to basic slag. This material is known also as Thomas slag, and is a by-product in the manufacture of steel from pig iron in phosphorus. The phosphorus content in this material when finely ground is about equal in agricultural value pound for pound to that carried in superphosphate. Basic slag carries considerable free lime, and this is an additional value; but it should be remembered that when applied at the usual rates in general not enough lime is added to make any great difference. Slag contains, in general, from 16 to 20 per cent phosphoric acid.

While it is possible that basic slag might be beneficial to your fruit trees in the way of increasing production, yet it is very doubtful. It would be perhaps safer and a wiser procedure to withhold fertilization this year and cultivation, providing the trees have been making a strong vigorous growth during the past several years. Moreover, it is possible the effects of last year's drought may have slowed up the growth of the trees sufficiently to cause the formation of fruit buds and that a good crop will be received next year. At any rate, withheld cultivation, fertilization and severe

(To Page 24)



NuREXFORM users get what they want, more sound fruit, which means extra profit from each tree.

1st Wonderful suspension of NuREXFORM gives uniform coverage, avoids clogged screens and nozzles, and no settlings in the tank.

2nd Fineness of NuREXFORM particles avoids bunching up . . . the distribution is thorough leaving no unprotected spots on foliage or fruit.

3rd NuREXFORM sticks . . . wind and rain after spraying will not wash it off.

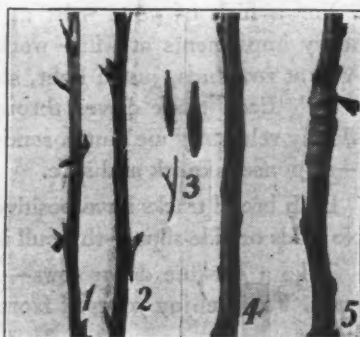
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Use NuREXFORM and wear the smile of satisfaction when you pick your fruit. Write for prices.

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Payette Valley Rex Spray Co., Ltd. . . . Payette, Idaho



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IMPROVED AND PATENTED
DRY ARSENATE OF LEAD



Methods Used in Shield Budding.

1. Bud stick with leaves trimmed away. Note leaf stem left for handle. 2. Buds cut but hanging from stick. 3. Buds ready to insert in stock. 4. Bud in position. 5. Bud tied with raffia.

which time the budding work may be done. The shield budding method is generally employed, placing the buds on the north side of the seedling trees from four to six inches above the ground. After tying with twine or raffia and cutting the string in a period of about two weeks, nothing is done to the seedling until the following spring. At this time the top of the

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SOME GARDENS FAIL

By TUDOR J. CHARLES

THE GARDEN, bearer of fruits, flowers and vegetables, has ever been a pride of the homemaker. Sentiment, seldom seen in the nature of business-minded men and women, is often portrayed when the subject of their backyard garden plots or flower beds is hit upon.

manufacturer's illustrated catalog, will provide the essential information. Hand-operated plows, rakes, cultivators, seeders, disks and harrows can be found—even small rotary hoes which tear out little weeds and pulverize the soil. The improvements and developments in garden tools are a delight to a machinery-minded boy and an inspiration to grown-ups who desire a productive and beautiful garden but have never had much success at raising one or have found the labor of hand seeding, hoeing and



A small rotary hoe breaks the crust and gets the small weeds.

The demountable hoe equipped with cultivating teeth.

A side yard flower patch, tilled with a demountable seeder and hoe.

These modern tools lighten the work of caring for the garden.



If you are ever prompted to remark that apparently you don't have the gardening instinct, first ask yourself these questions: Have I planted my flowers and vegetables in fertile soil? Was my garden properly tilled and kept clear of weeds? Did I give it plenty of water? Did I spray for insects and diseases?

A good application of fine barnyard or poultry manure in late fall, winter, or early spring, plowed under to hasten decomposition, is generally sufficient to insure fertility. If manure is not available, commercial fertilizer may be applied. Unless the soil is analyzed, the safe plan is to use a complete fertilizer, but it is really a much better plan to send a sample of soil from the garden plot to the soils department of your State experiment station, where it will be analyzed free of charge and complete information furnished as to the fertilizer which should be purchased.

An analysis of your garden soil will also indicate whether or not lime is needed to sweeten it.

When we come to the question of tools for preparing the soil, a visit to a store which carries a full line of garden tools, or a glance through a

weeding too arduous for pleasure and comfort.

One of the ingenious developments in garden tools consists merely of a set of handle bars and a steel frame. Upon this versatile all-purpose implement can be attached seeders, furrow openers, weeders, cultivators and a wide variety of labor-saving devices which are used at various times during a growing season. The seeder or drill which plants flower and vegetable seeds either in rows or hills, can be removed after its work is finished and one of the other implements attached as needed.

These modern tools lighten the work of caring for a garden, save time, do the different tasks correctly, and add variation and technique to the tiresome function of the historic spade, hoe and rake. Where the garden is of more than "cracker box" size, they are needed.

Eveready Layerbilt "B" BATTERIES

built in layers to save you money

LOOK at the inside construction of Eveready Layerbilt "B" Batteries and you'll know the reason why most farmers prefer them over the old-fashioned type of "B" battery. Eveready Layerbilt "B" Batteries contain unique, patented flat cells and these are packed together tightly, filling all available space. In the Layerbilt you get more "active material" (power-producing elements) than is possible in a battery of equal size made up of individual cylindrical cells.

And these flat cells are not independent of each other, but interdependent. One cell rests on top of the other, with direct contact from cell to cell. This does away with 60 solderings and 29 fine wires, necessary to connect the cells in the ordinary type of "B" battery. You benefit, because the Eveready Layerbilt construction eliminates these 89 chances for trouble.

Eveready Layerbilts come in two sizes — Medium Size No. 485 and Large Size No. 486. Each of these will give their owner many more hours of service — hours that are more pleasant — service that is better and cheaper — than that which cylinder-type batteries give.

Next time you buy "B" batteries insist that they are Eveready Layerbilts. Eveready Layerbilt "B" Batteries can be had at all local dealers.



NEW WAY

Here is the exclusive Eveready Layerbilt construction. Only five solderings and two broad connecting bands, all other connections being made automatically. Waste space eliminated. Layerbilt construction is a patented Eveready feature.

OLD WAY

Here is the inside story about the ordinary 45-volt "B" battery assembled of separate, individually sealed cells. There are 30 independent cells, connected by 29 fine wires and 60 soldered connections—89 chances for trouble. Note the amount of space wasted between cells.



NATIONAL CARBON CO., INC. General Offices: New York, N. Y.
Branches: Chicago Kansas City New York San Francisco

Units of Union Carbide and Carbon Corporation

EVEREADY Radio Batteries



The Ospraymo Way is the
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Avoid costly delays. Use Ospraymo, the sturdy sprayer that has automatic agitators, a pressure regulator and gauge. Brushes on revolving paddles keep suction strainers clean—prevent clogging and lost time.

They are built to stand hard bumps and jolts. H. P. Miller of Grantsville, Md., writes: "The Ospraymo potato sprayer I bought 10 years ago is still doing good work." John Smith, Westport, Mass., says: "Used your traction sprayer 20 years and still using it." J. Le Roy King of Tully, N. Y., says: "Union Leader has been going all spring and has performed wonderfully well."

They make two bushels grow where one grew before. As high as 600 bushels of potatoes per acre is possible if you SPRAY with our OSPRAYMO LEADER.

We make a sprayer for every need. HIGH PRESSURE guaranteed. Let us tell you the name of our nearest dealer. We have been world leaders for 48 years. Send for our free illustrated catalog.



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THE SPRAYER THAT NEVER CLOGS

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Managing proprietor: G. Zorn

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"Black Leaf 40" is the great outstanding enemy of insect pests. Kills by contact, also by fumes. If you have never used "Black Leaf 40" it will be to your advantage to begin doing so.

APHIS... LEAFHOPPER... THRIPS

Protection from insect damage is essential if you expect to raise a full, profitable crop of fruit, vegetables or flowers. For over 20 years "Black Leaf 40" has been accepted as the growers best defense against Aphids, Leafhoppers, Thrips and other insects.

For Poultry Lice

Use "Black Leaf 40". You do not need to handle the birds. "Paint" the roosts lightly and the heat from the birds' bodies gradually releases the fumes which kill the lice.

TO KILL MITES: Spray nests and inside of house with "Black Leaf 40" according to directions.

If your dealer does not have it, write us.

Tobacco By-Products & Chemical Corporation, Incorporated
Louisville, Ky.

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MONTHLY FRUIT and VEGETABLE REVIEW

By PAUL FROELICH

BUREAU OF AGRICULTURAL ECONOMICS

WINTER STAGED a real flare-back during the early part of March. Many sections of the country from the Rocky Mountains to the Atlantic Coast experienced low temperatures and exceptionally heavy snowfall. The snow should afford some relief from the severe drought of the past year. The cold wave damaged tender vegetables throughout the South.

Carlot movement of fruits and vegetables maintained a steady vol-



Shredded oiled paper would have prevented this damage from scald.

ume during late February and the first part of March—around 17,000 cars weekly. But, with the opening of spring, shipments of early truck crops were expected to increase rapidly. Prices of various products showed only temporary improvement, during brief periods of reduced supply from certain producing districts. In general, the price level was rather low, as business conditions have not yet shown material improvement.

Scalded Apples Bring Lower Prices

In view of the importance of European markets as an outlet for apples, growers and shippers are again having their attention called to the necessity of controlling scald. Many lots of scalded apples from America have been appearing on the European markets since the first of the year, according to reports from F. A. Motz, fruit specialist in Europe for the Foreign Service of the United States Department of Agriculture. Most of these consist of barreled and basket apples, although an occasional box lot has also been affected. Scald is effectively controlled by the use of about one and one-half pounds of shredded oiled paper (not waxed), well distributed throughout the barrel, and by the use of oiled wrappers in boxed apples. The average cost of the paper is about 15¢ to 18¢ per barrel. It cannot be too forcibly urged that shippers of scald susceptible varieties pack their apples properly. Not only do scalded apples have to be sold at a decided discount, sometimes as much as \$2 or \$3 per barrel, but the presence of unsound fruit on the markets affects adversely the prices of good apples. It should be borne in mind that scalded, slack, or waxy fruit costs as much to lay down in European markets as sound fruit.

The following example indicates the effect that scalded fruit has on the value of a lot of apples: On Thursday, January 29, Mr. Motz attended an apple sale at the Borough market, London. One broker had a lot of 400 barrels of Rhode Island Greenings advertised in his catalogs. There was a good attendance of interested buyers. When the Greenings

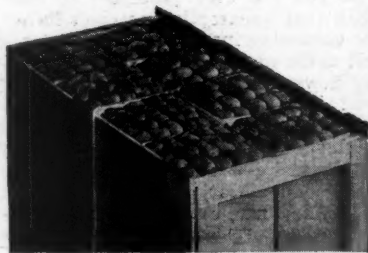
came up for sale, eight barrels were placed upon the platform for inspection. Three barrels were opened which had a fine appearance—beautifully faced, of the desired size, and apparently in splendid condition. Several buyers were overheard to remark, "They will fetch 28 to 30 shillings" (\$6.81 to \$7.30 per barrel). Upon the opening of the fourth barrel, however, the audience was dismayed to see that the fruit was badly scalded. So it went through the eight barrels. Two or three barrels were emptied out into a large basket. These revealed a most disappointing condition. As the sale went forward, fruit which, unscalded, would have brought the equivalent of \$6.81 to \$7.30 was "knocked down" at \$4.62 per barrel.

Mr. Motz reports that certain importers are beginning to insist on the use of oiled paper in their supplies, and others will have it written in their contracts when purchasing their requirements for the coming year. At least one large importer intends to circularize his shippers, calling their attention to the condition in which their apples have arrived this season and suggesting the proper use of shredded oiled paper.

Apple Holdings Still Large

On March 1, the commercial cold storage houses in the United States reported 484,000 barrels, 11,337,000 boxes and 2,855,000 bushel baskets of apples still on hand. Total holdings under refrigeration were equivalent to 5,215,000 barrels, which is 22% more than the supplies of a year ago and 14% above the recent five-year average. Holdings of barreled apples were not much more than half those of March 1, 1930, and were two-thirds less than the average for this month. Boxes were 55% more plentiful than a year ago and about 51% above average. The holdings of baskets were only a little heavier than in the spring of 1930 but were 55% more plentiful than the average supply for March.

Shipments of apples during early March were about 50% heavier than



Florida strawberries. A short crop but the prices to growers were favorable.

a year ago, but the daily average had decreased rather sharply to 225 cars. Movement from the West, particularly Washington, has been much more active than last year. F. o. b. prices at shipping points remained practically unchanged. Because of dullness of city markets, the usual spring price advance had not yet occurred in the important shipping areas. Foreign demand was still good, but the appearance of considerable scald, especially on eastern apples, was tending to depress British prices. Australian apples were beginning to arrive in European markets.

Early Berries in Light Supply

The outturn of Florida strawberries proved rather disappointing, but prices to growers were favorable. Shipments of 800 cars by mid-March were 400 less than movement of last season to the same time, and it was expected that this lack of 400 cars would prevail until the end of the Florida season about April 10. As peak movement was completed, returns to growers in the Plant City district advanced to 15¢-19¢ per pint or 30¢-37¢ per quart. Low temperatures and frosts of early March delayed first shipments of berries from Louisiana and reduced the Gulf States crop to some extent. Louisiana was expected to become very active by mid-April.

Citrus Prices Moderate

With Florida grapefruit jobbing in consuming centers at \$2.25-\$3 and oranges at \$3-\$3.75 per box, prices of citrus had not yet made any great recovery. The Texas grapefruit season closed with a total of about 2300 cars shipped, compared with nearly 3500 during the 1929-30 season. Forwardings from Florida continued at the rate of 130 cars daily and the seasonal output from that State is running 50% heavier than a year ago. Orange shipments from Florida decreased during early March to 150 cars per day, but California was credited with 225 daily and total movement of this fruit was running 50% heavier than last spring. Mixed citrus shipments from Florida still required 70 cars daily.

Early Vegetables Moving

The asparagus season in California got away to a good start and by the first part of March a dozen cars were being shipped each day, with southeastern States soon to begin. Crates of one dozen bunches were jobbing at \$5.50-\$8.50 for medium to large-sized stock. Production of California asparagus for market is forecast at 1,839,000 crates, or 48,000 more than last spring. South Carolina is increased to 396,000 and Georgia to 112,000 crates, making the total for the three early States 5% greater than last year.

Spinach was still moving actively from southern Texas, but the season there will be finished by April. Virginia expects a large crop of spring spinach. Returns at shipping points in Texas were low. Plantings of second-early peas in parts of California outside the Imperial Valley are estimated around 22,000 acres, compared with 19,000 last season. In five second-early States as a group, there may be 29,150 acres, or 8% more than last season and 70% more than their recent five-year average. Planting and production of green peas have made great strides in the last few years. Imperial Valley and other California shipments were becoming active in March, and imports from Mexico were fairly numerous.

First ripe cantaloupes were expected from Imperial Valley by April 1. The acreage in that district has been reduced by one-tenth from the very high level of last year and is now estimated at 45,000 acres. Watermelon plantings in Florida were expected to be reduced sharply to 28,000 acres, as against 34,700 last season. Imperial Valley of California is likely to maintain plantings at

9500 acres. Movement of carrots has been fairly heavy from southern Texas and California.

Potato Shipments Heavy

Signs of improvement were appearing in the potato market. Quite a number of the important shipping districts reported slight price advances during the first part of March, even though carlot movement continued heavy and averaged more than 700 cars daily. There were evidences that supplies were rapidly diminishing in some producing areas. Maine, the North Central area, and Idaho continued to furnish the bulk of the carlot movement. In Chicago, deliveries were being made on "futures" sales, which were consummated in January.

Sweet Potatoes Scarce

Movement of sweet potatoes was running one-third lighter than at the same time last spring, and averaged only 40 cars daily in early March. The city jobbing range on eastern stock was \$1.50-\$2.90 per bushel hamper, while Carolina Porto Ricans sold at \$1.15-\$1.60 per bushel and southern Nancy Halls at \$1.45-\$1.75. Some white yams were still moving from the Eastern Shore of Virginia and brought \$3.50-\$3.75 per barrel in eastern terminals.

Imperial Lettuce Finished

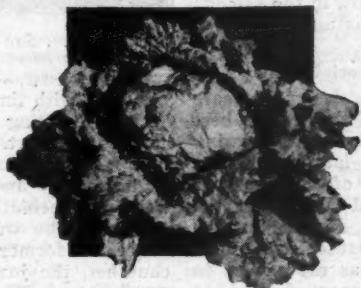
Imperial Valley lettuce had recovered considerably from the heavy rains of February, although a large acreage was lost. Shipments had again increased to a daily average of 200 cars, but the Imperial season was expected to close by the last week of March. Arizona's spring crop is beginning to move from an acreage about one-third lighter than that of last spring.

That State has about 16,000 acres this year, while spring lettuce in California is reduced only 2% to 30,850 acres. Prices in Imperial Valley have fluctuated greatly. A very high price level was reached shortly after the February rainstorm. A rapid decline, however, soon followed, and more recently the cash-track market strengthened again to \$1.75-\$2 per crate of 4 to 5 dozen heads, with the 6-dozen size ranging \$1.25-\$1.40. Terminal markets continued in fairly good condition.

British Markets Want Barreled Apples

APPLE GROWERS who have been packing some of their fruit in baskets, or hampers, for the British markets have been advised to abandon the innovation and stick to the barrel container, which has long since established its popularity, according to the Maryland Department of Agriculture. The department says: "The basket container is unpopular in England. One objection is that the weight of fruit in three baskets is not equal to that in one barrel, and another is that the ocean freight is 35 cents per basket, or \$1.05 on three baskets, compared with 90 cents on one barrel."

"Strawberry Varieties in the United States," is the title of Farmers' Bulletin 1043, revised, just issued by the United States Department of Agriculture, Washington, D. C.



Imperial Valley lettuce moved at a daily average of 200 cars.



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AMERICAN FRUIT GROWER "WONDER TOUR" [From Page 7]

cent to this handsome street lies the main financial center and the shopping district; and it extends on to the Civic Center, with its massive public buildings and splendid convention auditorium. Chinatown, the Latin Quarter, Telegraph Hill, Nob Hill, Russian Hill and other picturesque and romantic sections lie to the right or north of Market Street, and this is the most historic and fascinating part of the city of the Golden Gate.

To the south, behind San Francisco's encircling hills, are flower-embowered residence communities and the great deciduous fruit center, San Jose, beyond which lies a succession of orchards and gardens leading down to gay Santa Cruz, historic Monterey, famed Hotel Del Monte, the Seventeen Mile Drive, Pebble Beach, and Carmel-by-the-Sea. Blossom time in the valleys, as we ride down from San Francisco, via the Southern Pacific Railroad, is one of the never-to-be-forgotten sights of a lifetime.

The Orange Empire of Southern California

Los Angeles is an excellent stopping-off place for extended tours into the heart of California's famous fruit sections and our first day in this wonder city will be spent in just such a fashion. But don't get worried—the citrus fruit tour is packed with splendid scenery and interesting places, and our stay in Los Angeles won't be all business. All of the second day has been left open for us to have a grand time; and you'll agree it can be had when you read what awaits us after the orange grove tour.

The world first heard of California in the gold rush of 1849. But in recent years horticultural gold has



Lettuce field in the Imperial Valley.

come to the fore, and a few years ago, the oranges and lemons of southern California had a value of nearly \$100,000,000. The trip through this orange empire, which includes also lemons, walnuts and vineyards, will be particularly interesting to the members of the AMERICAN FRUIT GROWER TOUR. Our special Pacific Electric Railway train will leave Los Angeles, passing through the gardens and orchards of the San Gabriel Valley and through its many prosperous communities, reaching the beautiful city of Riverside, nestled among mountains, well before noon. Here a stop of two and one-half hours will be made, giving opportunity for lunch and a visit to the world-famed "Mission Inn" with its "Garden of Bells", cloister, art gallery, oratory, and many other of its interesting features.

The return journey leads through Colton, the hub city of the orange industry; through San Bernardino, home of the National Orange Show; thence to Redlands, far famed not only for its fruits but for scenic beauties, among them Smiley Heights. Here, amid parkings and resplendent floral culture, one looks over one of

the world's most noble vistas—a beautiful valley of ranch and orchards rimmed by peaks rising more than 10,000 feet into the sky. Looking down from Smiley Heights the city of Los Angeles lies before us like a relief map. Back in Los Angeles in time for a seven o'clock dinner, with the evening and all the next day before us!

Keeping Busy in Los Angeles

There are a thousand and one things to be done in this interesting city. In the evening you have your choice of scores of California movies, and you will be almost certain to find a "pre-view"—an advance showing of a movie in the making, with directors and stars in the audience. For those so inclined, it is easy to find a dance at a smart hotel or night club where prominent picture and stage stars are frequently seen among the guests. Then again, you may want to have dinner at Long Beach, Venice or Ocean Park, return to the city and take in a hockey game or prize fight. For those who want quieter entertainment, there are evening concerts at the Beach cities.

After thrilling days in Los Angeles, we'll all pile aboard a Southern Pacific train and speed through the night to Niland, Calif., in the famous Imperial Valley, arriving in time for breakfast.

Productive Imperial Valley

Imperial Valley, a desert 25 years ago, today is one of the world's best known fruit and vegetable growing sections, where the latest and most scientific methods of culture are practiced. Imperial Valley is the largest cantaloupe district in the world. Fields of lettuce are grown the year round; peas are picked in December, and grapes shipped in June. Winter strawberries are abundant; asparagus is packed in February and, strange as it may seem, 3000 acres are devoted annually to cotton growing.

A glimpse into the various packing plants will reveal the most modern and efficient methods of shipping fruits and vegetables. The tour through Imperial Valley will take most of the day, and late that afternoon we again board our special—this time to leave sunny California for good—and cross Arizona and New Mexico to El Paso, Texas, the last important stop of the tour. Arriving at El Paso at noon the next day, motor cars will be at the station to take us on a sightseeing trip around this well-named frontier gateway city, the metropolis of the old Southwest. At the conclusion of our trip around El Paso we cross the international bridge into the famous

old Mexican city of Juarez. You will be particularly intrigued with this part of the tour.

Historic Juarez

The atmosphere, architecture, people and customs of Juarez, centuries old and six minutes away from El Paso, are as foreign as one will find at the end of a 3000-mile ocean voyage. Its historic Mission Guadalupe



Union Square, San Francisco, located in the heart of the city.

was built with timbers carried on the backs of toiling Indians 100 miles across the desert. In its market place are luscious tropical fruits, hand made pottery and woven baskets of weird and primitive design. Bullet-riddled adobe walls bear mute evidence of former revolutions. The churches, the juzgado, the bull ring and custom house—all are battle scarred. Yet from behind curtained windows can be heard the sweet music of mandolins and guitars and the rhythmic click of castanets and flashing heels.

A few hours of the afternoon are left for your own pleasures upon return to El Paso and early in the evening we again board our special via the Rock Island Railroad—this time for home. Up through New Mexico, across the Texas Panhandle, to Kansas City, where we make immediate connections with The Milwaukee Road for Chicago.

A glorious trip through a gorgeous wonderland, with the best of traveling companions — American fruit growers. You'll talk about it for months afterwards. Every detail is arranged in advance by three great railroads and the best of accommodations are provided. Plan now to be among the happy throng.

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THE CHERRY GROWER TAKES A BIGGER PIECE OF PIE

(From Page Five)

to do it became an immediate problem, with thousands of acres of new orchards coming into bearing.

Herman Ullsperger, manager of the Door County Fruit Growers' Union, had been doing a little worrying, also, along with the rest of his officers and members. Wisconsin feared the competition of scores of unallied canners; foresaw the time when, with a big crop and no working agreement, a canner here and there would start to dump at any old figure, which would drag the cherry price down to a point where the grower would be left facing a tremendously long and terribly hard winter.

So Mr. Ullsperger came across Lake Michigan and conferred with the heads of Michigan Cherry Growers and said, in effect, to them:

"Your problem is our problem; your fears are our fears. Let's get on a train and go down to Washington and see the Federal Farm Board and have a lot of talk."

So they went to Washington and had a lot of talk and the agreement reached went something like this:

The government would advance to the Michigan farmers enough cash to build or acquire processing facilities for their crop; as security for this loan, they would accept the plants purchased or built and also a mortgage on the Wisconsin co-operative's physical assets. Wisconsin was perfectly willing to pledge its properties for this purpose.

The Farm Board specified many items, among them that the Wisconsin management would aid in launching the Michigan enterprise, that the loan must be amortized by the end of the twelfth growing season and that the crops be marketed jointly.

It was early in May that the deeds to the canning plant and cold storage of the Grand Traverse Packing Company, of Traverse City, were handed over and A. J. Rogers, first president and chief organizer of Michigan Cherry Growers, was named manager.

First Year's Results Gratifying

The response to a plea for grower contracts in Michigan was splendid. Over 300 cherry producers signed up within a few weeks and their cannery in Traverse City processed 8,500,000 pounds in 1930, or 3,000,000 more than it had ever handled while operated as a private concern.

But the packing and freezing of the crop was only one item. Door county had a short yield; the combined pack of the co-operatives was something over 16,000,000 pounds, but the country as a whole produced 90,000,000 pounds of sour cherries, or 21,000,000 more than the 1928 crop which had held the record.

Back in 1928, canners had said that another 5,000,000 pounds would have smashed the market, knocked the bottom out of prices and left the grower with his ledger as red as his crop had been in July. Along with this unprecedented production for 1930, business went all to pot and people began getting along without many things they would have bought otherwise.

It would have been perfectly natural for canner after canner to commence to let go for what he could get. A few of them did. But 20 per cent of the crop was in the hands of the growers; the whole industry was watching this widely-discussed venture; and, somehow, most of the private canners played the game with the co-operative pool and held the price to a point where the orchard

owner can show a profit and where the ultimate consumer can buy cherry pie at a reasonable price.

Price Stabilization the Objective

This stabilization of prices is one of the great objectives of the grower organizations. They do not want to see cherries sky-high in years of lean production any more than they want to lose money in the seasons of heavy tonnage. In a normal year it is believed that the grower pool will act as a balance wheel in the canned cherry market.

The cry that government subsidy would drive private capital to the wall has not been justified. No cherry canners have been put out of business so far by the co-operative movement and it is unlikely that any will be forced to discontinue if the first year's experience can be taken as precedent. The three-and-a-half spread is in the discard in the Traverse City region. Canning costs either will have to be cut, less profit taken or private capital will not stand in a favorable light compared to the grower enterprises. To be sure, there is always the chance that things will go wrong with the co-operatives and their contracting growers turn back to independent canners. That chance will always exist. But . . . Door county growers have been pretty well satisfied for nearly a quarter of a century, and the Door county management has a finger or two in the Michigan pie!

The Traverse City growers have received five and three-quarters cents a pound in cash, and a half a cent a pound in stock in their cannery for the 1930 season. This stock distribution represents the amount set aside to repay the government out of the first year's operation, and the stock pays seven per cent annually, a fixed charge against operations. Wisconsin growers have received six cents a pound cash. They have no debt to amortize in Door county.

Independent canners in Michigan paid all the way from five cents a pound to five and three-quarters. With 320 growers contracting to deliver their crop to the Traverse City co-operative in 1930, the organization now boasts of 470 grower contracts.

To take care of this increased tonnage, another loan of \$21,000 is being negotiated with the Farm Board, in addition to the \$408,000 which was borrowed from this source to purchase the first facilities. The recent loan will acquire control of a cannery at Frankfort, Mich., which will give Michigan Cherry Growers two factories and three pitting stations for the handling of probably 50 per cent of the tonnage grown in its territory.

From the beginning, Mr. Ullsperger and Mr. Rogers have thought and planned in nation-wide terms; the Federal Farm Board has specified that any other cherry growing districts which can qualify must be admitted to the pool. A splendid start has been made; how far the movement will spread, none can tell, but the performance of these grower-owned factories and grower-controlled sales organizations will be interesting to watch.

More than 50 vegetable growers, orchardists, and flower and ornamental producers attended the recent Horticulture Week at the Pennsylvania State College. Water relations in plant growth was the theme of round table discussions and laboratory study.

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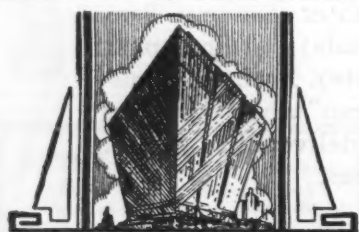
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CHATS WITH THE FRUIT GROWER'S WIFE

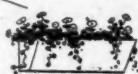
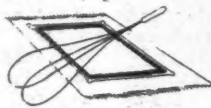
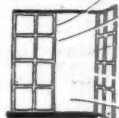
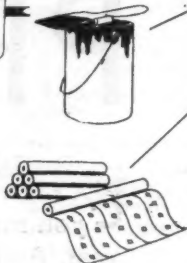
By HAZEL BURSELL

SPRING HOUSECLEANING!

What visions that term used to conjure up for homemakers of the past generations! And what "turning outs" these hard-working ancestors of ours used to give their houses! And at what terrific costs in time, energy, labor and inconvenience to all members of the family!

Nowadays, thanks to numerous built-ins, movable floor coverings (instead of tacked down carpets), smooth floors, a minimum of dust-

though it can be done with the aid of your chamois and a ladder. Two persons, one to man the hose and the other to work the brush, can do all



catching bric-a-brac, and efficient labor-saving devices, we have no reason to "dread" spring housecleaning. At the same time, our houses are much cleaner the year round with the expenditure of a fraction of the effort than in the "good old days" when every housekeeper performed Herculean labors in her efforts to keep the ancestral castle clean.

Duties are Listed

Present day housecleaning merely means a little more extensive weekly cleaning, the "extensions" to consist of washing woodwork, kalsomining and repapering where needed, washing windows, washing or cleaning curtains and drapes, washing or dry cleaning rugs and carpets, polishing, varnishing or repainting floors, polishing or cleaning furniture, cleaning upholstery, cleaning drawers and closets, sunning and airing mattresses, washing and storing blankets and other winter woollens, painting porches, flower boxes and screens, putting up screens and awnings, and such other activities not ordinarily included in daily and weekly cleanings.

However, there are tricks in every trade, and housecleaning is no exception. The more "tricks" you know, the easier your work becomes. The purpose of the "Chats" column this month is to present a few of the "tricks."

Chamois For Windows

Take window washing, for instance. All the windows, mirrors and glass doors in the entire house can be quickly and easily cleaned and polished with a chamois wrung out of clear warm water. Invest in a chamois large enough to be of real service (it should cost between \$1.50 and \$2.00) and it will be one of your most useful servants for many years. Do not use soap in the chamois water. If your windows are very black and sooty, it will be best to use two pans of water, one for the preliminary rinse and another for the final cleaning. Wring the chamois quite dry for the final cleaning.

For cleaning the windows on the outside, I find a hose and long handled brush (handle six to 10 feet long) most efficient and convenient,

the windows in a large house in a very short time by this method. You must take care to lock all windows on the inside before beginning, however, and it will be necessary to take down all screens. Never try this method, or any window washing method for that matter, when the sun is shining directly on the windows to be cleaned, as they are apt to dry "spotty." If the water is allowed to run off slowly, they will be beautifully clear and sparkling without any hand rubbing or drying. Use the hose and brush simultaneously, rubbing the entire window surface with the brush and finally rinsing with clear water from the hose.

Screens Need Oiling

Did you know that you can keep your screens looking like new and at the same time greatly prolong their life by oiling them? Before putting them up in the spring, just go over the wire part with a clean brush dipped in boiled linseed oil, taking care to use the *smallest possible quantity of oil in the brush at one time*, as too much oil will fill the meshes of the screen, spoiling its appearance. The wood frames need frequent repainting, especially if painted in the "trim" color of the house. Of course, all the trim color should be freshened at the same time. You will be surprised at the improved appearance which results from repainting the house trim at quite frequent intervals. The expense is small.

Rugs that have been thoroughly and regularly cleaned, as is the case in most modern homes, need but little extra attention, though all will benefit by occasional dry cleanings. If you still have tacked down carpets, by all means get rid of them, if at all possible. They are unsightly, dirty, and a constant source of terrific labor for the housewife. A quiet patterned linoleum rug is much to be preferred for the farm; if expensive fabric rugs are out of the question. Further, it is next to impossible to keep deep-pile rugs clean without the aid of a vacuum cleaner. You can freshen up your best rugs by giving them a thorough cleaning to remove

dust and dirt and then brushing lightly over the surface with a clean rag wrung out of clean warm water to which a few tablespoons of ammonia water have been added. Wring the rag dry. Let the rug lie on the floor both during the washing and drying periods.

Wax Your Linoleums

Linoleums should be given a thorough scrubbing with the scrub brush and some cleaning powder, then rinsed thoroughly, and finally waxed.

The wax will fill the pores in the linoleum which will thus stay clean much longer and at the same time be very easy to clean in the future. Some housewives say that if you will then wipe up the floor lightly every day and apply another light coat of wax every day for one week you will finally have a floor covering that will stay clean over a long period. Never use varnish or shellac on inlaid or embossed linoleums, as it gives them a dirty "yellow" color, spoils that "velvety" look which is part of their charm, and wears off in patches and finally has to be removed with varnish remover. Wax does the same work and is much better in every way.

Curtains and drapes which cannot be washed successfully should have a thorough shaking, brushing and airing. You owe them a dry cleaning once a year or at least once in two years. Washable curtains should be kept white, crisp and fresh at all seasons of the year—not just at housecleaning time. This is also the season for taking inventory of the household needs and replacing wornout, hopelessly soiled or stained drapes, curtains, rugs, etc.

Need New Wallpaper

Nothing, to my way of thinking, is quite so depressing in the home as waterstained kalsomine and wallpaper. It is a sign of shiftlessness, miserliness or both. Anyway, it's a disgrace! Yet, how frequently we see it in old houses. First, the leaks should be repaired by a careful workman—neither much expense nor labor is usually involved in the final analysis—and then fresh paper and kalsomine applied. Take care in choosing wallpaper to get pleasing patterns and nice, clean cut colors, quiet colors and patterns being preferred in almost every case, as the walls should form quiet backgrounds for your furnishings and drapes. Old, faded and torn wallpaper should be replaced in any case, since fresh, clean wallpaper is worth many times its cost in improved morale for all the family.

Only first quality paint of some standard brand is worth the trouble

of putting it on. Poor paint on any wearing or weathering surface is very poor economy. The surface to be painted must be clean and free from dust. Here again take care in choosing your colors, using quiet neutral colors for backgrounds (floors and woodwork) with touches of suitable gay contrasting colors for trim and color accent. Always choose clean looking colors, steering clear of dirty, "brindle" colors. Use light, cheerful colors in a rather dark room, and the quieter shades in a too-light room.

Cleaning Solution Given

The best solution that I know of for washing woodwork is a mixture of common coal oil and vinegar, to be applied with a clean, soft cloth and the surface wiped dry afterwards with a large, soft dry cloth. The general proportions for this cleaner are half and half, or one cup of vinegar to one cup of coal oil. It leaves an odor in the room for a few hours, but this soon passes away. This mixture will clean the dirtiest, smokiest woodwork quickly and with surprisingly little effort. Don't forget to wipe the surface dry with a clean cloth after washing it!

If your house has been lived in for some time by your family the chances are excellent that there has been a gradual accumulation of useless knick-knacks, all of them guaranteed dust catchers and most of them of questionable beauty, to say the least. Have you enlarged portraits of your ancestors on the living room walls? Is your piano top filled with photos of friends and relatives? Have you a lot of dinky "tidies" and head rests and whatnots on your chairs? Have you doilies on every

surface that will hold one? Have you various collections of dried grasses, flowers, etc., in your rooms? If you have any or all of these things, it's time you had a real house cleaning and weeded out all the useless, personal belongings, at least from the living room. Suppose you take out all articles except the rugs and furniture, then put back a few articles, such as the best pictures, pillows, wall hangings and pottery, things which really belong in the room, and which have real beauty of color and proportion in themselves. Store all the others. You can get excellent ideas for the arrangement of interiors from pictures in good magazines. Also try arranging your furniture in new ways and note the effects in the room of these different arrangements, finally selecting the best one. Remember that "variety is the spice of life" in the home as well as in other things.

Clean a Room a Day

Of course you know that the way to clean your house is to clean one room at a time, and complete that in every detail before beginning on another. This inconveniences you and your family the least and it keeps your house in order during the housecleaning period, because you can start and finish one room in a day, thus having it arranged and ready for use again by night, unless, of course, you do some painting. If possible, it is well to have some outside help during housecleaning, so as to conserve your health and energy. You know, too, that if you plan to do any painting, kalsomining or papering this must be done before you start the regular cleaning work, for obvious reasons.

TRIM LAWNS ESSENTIAL

WHAT'S the use of having Spring Housecleaning inside the home unless you make the outside attractive also?

To begin with, the lawns, gardens and flowers should be in perfect order, with all waste and rubbish removed. The flower beds should be carefully weeded and spaded in order to have a well-groomed look. Trees, large and small, should be pruned and shaped by someone who knows his business. Overgrown shrubs should also be pruned.

Yard fences, walks, porch railings, window screens, and porch boxes should all be kept in excellent repair and neatly painted. No matter how old your house is, it can appear really charming and home-like when given a fresh coat of paint as needed and set off by spacious green lawns and green shade trees.

Transplant Annuals

Last month we urged the planting of quantities of seeds of profusely flowering annuals as part of your

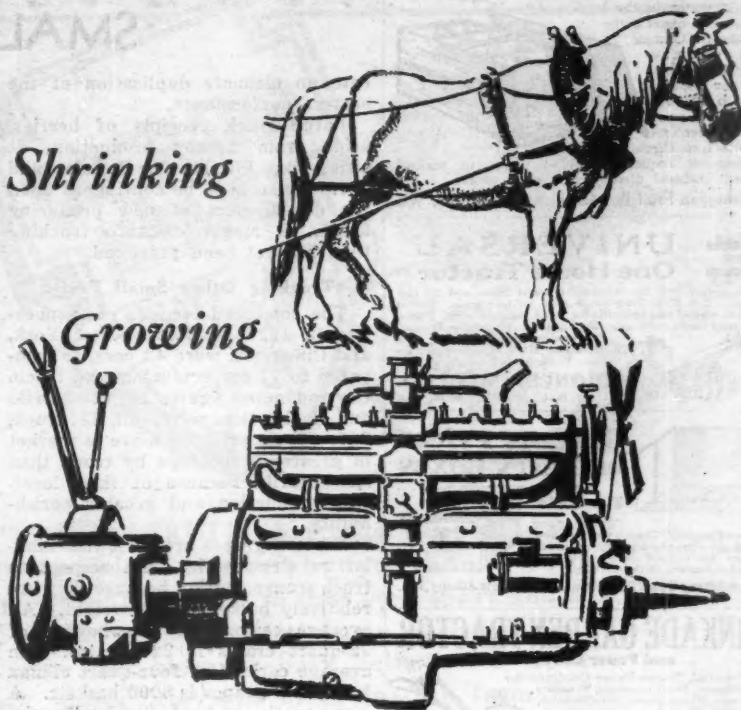
March activities. This month and next you should have the seedlings large enough for transplanting to their final growing space. If you have studied your seed catalog you will know where to plant each variety so that it will grow best. You can also work for color combinations in your annual borders.

Finally, let me urge that, if at all possible, you arrange to keep your lawns, shrubs and flowers green all during the hot summer months by watering them thoroughly. Remember that a thorough soaking once a week is far better for the lawn and plants than a "sprinkle" once a day. Watering after sundown will conserve water. Lawns should be kept neatly mowed and clipped. You should think of your green clipped lawn as the frame for the picture which your home makes. Even a humble cottage seems lovely with the proper setting.



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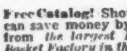
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THE MOTOR TRUCK IN THE SMALL FRUIT INDUSTRY [From Page 8]

cate an ultimate duplication of the eastern performance.

Large truck receipts of berries, aside from nearby production, at cities like Pittsburgh, Buffalo, and Syracuse seem to be contingent upon the development of new producing areas, or longer distance trucking than has yet been practiced.

Trucking Other Small Fruits

The combined receipts of raspberries in 1929 at Boston, New York, and Cincinnati were 42 cars, as compared to 77 car equivalents by truck. Corresponding figures for dewberries and blackberries were, rail, 63; truck, 248. These products move to market in greater percentage by truck than strawberries because of their localized production and greater perishability.

Eastern grapes are somewhat similar to strawberries with respect to truck transportation because they are relatively bulky for the weight. An average carload of strawberries of 32-quart crates is 224 crates. An average carload of four-quart climax baskets of grapes is 3000 baskets. A large truck can haul a carload equivalent of either commodity, and sometimes more. Merchantability is similar, though it is often easier to sell grapes in truckload lots in small cities. However, grapes are not so valuable as berries, and therefore the practical range of truck hauling comes within a 250-mile radius from the Benton Harbor (Mich.) district, and around 150 miles from the Chautauqua and Finger Lake grape belts of New York.

Outstanding movements of grapes reported are from Benton Harbor to Indianapolis and Milwaukee, from Eastern Shore to New York City, and an occasional load from California to Salt Lake City (740 miles).

Unsolved Difficulties

The same grade of berries and grapes moves by truck as by rail, but the truck is also called upon to salvage wet berries and first and last pickings. Strawberries picked after a rain get soft so quickly that rail shipping is often out of the question. Last year some of these berries were trucked from Tennessee to St. Louis and arrived in a salable condition, but, of course, brought a low price. At Atlanta, last season, 11 truckloads of these berries arrived from Tennessee the day after a rain. Atlanta dealers were handling from one to two cars a day, and the heavy receipts of wet berries demoralized the market. The dealers with berries on track and bought at shipping points lost heavily. From their viewpoint this movement was very objectionable. From the viewpoint of the grower in Tennessee, the truck was a means of obtaining a salvage income from what otherwise would have been a complete loss. From the viewpoint of competing areas, it killed the Atlanta market for a week.

Truck receipts of strawberries at a number of markets have resulted in violent fluctuations of prices and supplies. Philadelphia is the outstanding example. Here in 1929 the truck receipts were estimated as 1260 cars in contrast to only 386 cars by rail and boat.

On May 21, 1928, for example, strawberries in Philadelphia were \$3.50-\$4 per crate. While only 6625 crates were reported destined for Philadelphia by truck from the Eastern Shore, 20,000 crates were re-

ported unloaded. Evidently the high price caused a heavy diversion, which broke the market to \$1-\$2.10 on May 22.

The Delaware Bureau of Markets in 1928 tried to correct this condition by giving a market news service to growers and at cost to shippers. They obtained by telegram the market conditions of the large markets from the Federal Market News Service and in addition telephoned to the smaller markets within trucking distance.

It was found that shippers availed themselves of this service but overdid it. Markets on which berries were scarce today would, in many cases, be oversupplied tomorrow. There were too many diversions and no way to gauge them. It was decided that only by unified control of truck shipments could the distribution be rationalized.

Other markets suffering in similar fashion are New York, Baltimore, and Newark.

The Federal Market News Service supplies the trade with advance reports on shipments, car passings, and cars on track. Without truck arrivals, shippers were able to feed the market rationally by the aid of diversions and could gauge prices. In New York City berries are now often sold to be paid for at the price prevailing later in the day. Hucksters and small jobbers refuse to handle them on any other basis. Many of these peddlers are tricky and irresponsible. Such a condition makes a "buyers' market" in berries.

No means have been devised to se-

Tests Freezing Processes

DR. J. CECIL RHODES, Director, Medical Arts Laboratories, Philadelphia, using a complicated scientific instrument known as a refractometer, in laboratory tests to determine the effects of the new quick-freezing process upon fresh fruits frozen for year-round consumption. Tests in



which fresh Georgia peaches frozen last summer were employed, show that the fruit has retained all of its flavor, nutritive values, mineral salts, oxidizing enzymes and other chemical constituents. Dr. Rhodes' findings are expected to prove of major importance in charting the rapid development of the frozen fruit industry.

cure to arrive reports on truck movements, and, as a consequence, such markets as receive large truck supplies are often groping blindly as to prospective supplies and prices.

Berries arriving mushy have been reported at St. Louis, Pittsburgh, and other markets. While trucks carry berries in excellent condition on concrete roads, growers and truckers should bear in mind that berries will not stand long truck rides on gravel or unimproved roads, and that delivery should be expeditious and in the cool of the night as far as possible.

Springfield, Ill., wholesale dealers have been securing berries from southern Illinois by wiring a country buyer who purchases the desired berries and turns them over to a commercial truckman for delivery.

Effect of the Truck on Production of Small Fruit

Growers of berries at a number of points some distance from railroads and within convenient trucking distance of large markets are increasing production as a result of the truck outlet. This was true of strawberries in Knox, Brown, and Jackson counties, Indiana, and at points inland from the Hudson River. In the Finger Lakes district of western New York the truck outlet has given a new lease of life to raspberry, blackberry, and strawberry production.

These products are of so perishable a nature that quick transit and minimum jarring and handling are of paramount importance. Trucks provide much faster delivery, in many cases, for the first few hundred miles, with only two handlings, as against six to eight by other means of transportation and damage is less on smooth roads. "Home-grown" berries have always been coveted due to superior quality and condition. The truck has resulted in a practical extension of the "home-grown" supply from 20 miles to several hundred miles. Thus at Philadelphia the trade speaks of Carolina berries as "home-grown."

The height of speed in handling berries is now evidenced in the early supply at Albany. Strawberries may be picked in the morning on the Eastern Shore, sold to a trucker before noon, delivered in New York City around midnight, where they are reloaded on a truck from Albany and conveyed to that city for the morning trade. Thus strawberries which were picked the previous morning in Virginia are served in Albany for breakfast. If they had been picked in Albany county they would not have reached the table any faster. This has the effect of making the Eastern Shore berries "home-grown" to Albany, though grown 350 miles away.

The significance of this as related to production is that growing areas within trucking range of large cities have an advantage over competing regions which must ship by rail. The North Atlantic coastal fields, Michigan, and fields in or near the Ohio Valley have a great strategic advantage in this respect.

The barometer of production points to a decline in the growing of berries in the environs of large cities because the producers in remoter areas often have the advantage of much cheaper land and labor. It puts communities far removed from other means of transportation on a par with formerly favored locations, provided they have good roads.

Barbara Angeles, is subject. The second the foothills, nando, S. valleys, districts. It plantings likely to count of condition. Beyond iting fac of this f winter to sitive to



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The tree humid co to wind breakage fruit, in and the is a nati which co son—but high rail be irrig water, b All in a technical but give matic co not diff a tempo worth t With Californ in the y soften o indicatio most im



Calavo

faculty : determin harvesti uniform fruit at especial mature come a Calavo growers' successe standard establish

"CALAVO" GROWS IN FAVOR

(From Page 9)

Barbara and parts of Orange, Los Angeles, and San Diego counties, and is subject to direct ocean influence. The second general district embraces the foothill slopes of the San Fernando, San Gabriel and Santa Ana valleys. Not all of the land in these districts is adapted to avocado culture. It is certain that many of the plantings made in recent years are likely to prove unsuccessful on account of unfavorable environmental conditions.

Beyond a doubt, the primary limiting factor of commercial growing of this fruit is the occurrence of low winter temperatures. It is also sensitive to hot summer temperatures.



Testing the fruit for maturity.

The tree thrives best in the more humid coastal districts. It is subject to wind injury, which is manifest in breakage of limbs, in blowing off of fruit, in the burning of young growth and the drying out of foliage. And it is a native of regions of high rainfall which comes during the growing season—but California is not a State of high rainfall and the orchards must be irrigated. They need plenty of water, but must have good drainage. All in all, it requires a good deal of technical knowledge to raise the fruit, but given the proper soil and climatic conditions and good care, it is not difficult to raise. And like many a temperamental being, it is well worth the cultivating.

With the varieties now grown in California, fruit ripens every month in the year. Since the fruit will not soften on the tree and the external indications of maturity are often almost imperceptible, considerable dif-



Calavo on the half shell, ready to be eaten.

ficulty is frequently experienced in determining the proper period for harvesting. In order to provide for uniformity in the maturity of the fruit at the time of harvesting, and especially to prevent the sale of immature fruit, which practice had become a menace to the industry, the Calavo Growers of California, the growers' co-operative organization, succeeded in having a State maturity standard of eight per cent oil content established. This action has elimi-

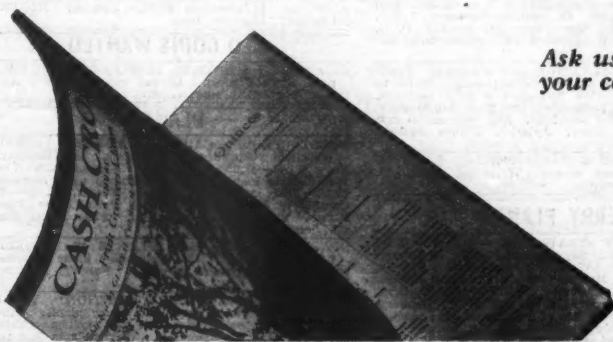
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GROW "FANCY" FRUIT. Keep that purpose in mind. You can't control the weather, but you can use weather and temperature conditions to time your spray and dust applications for greatest effectiveness. Frequent cultivation, after the blossoms have fallen, will destroy brown rot spores otherwise disseminating from fallen mummied fruit. "Cash Crops" for 1931 is full of just such practical suggestions.

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nated immature fruit, mostly wind-falls or stolen fruit, from the markets. The calavo standard is higher than this. The minimum oil content for a calavo is 13 per cent and it ranges from that figure to 30 per cent.

Every grower who belongs to the exchange must submit sample fruit to be tested for oil content before he can pick. If his fruit tests full maturity, he is then given an okeh to proceed with the picking. This is a protection not only to the grower, but to the fruit dealer and consumer also. The Calavo Growers found that the most important part of their work is to see that only good fruit and mature reaches the market and that consumers have proper instructions as to how to prepare it. If someone trying the fruit for the first time gets a good fruit, properly softened and prepared, he almost invariably becomes an enthusiast. But if instead he should first taste a flat and watery

immature fruit it would be hard to get him to try a second time.

That is the reason for "calavo." The Calavo Growers felt that they must distinguish the fruit on which they have spent so much time and money from the oftentimes immature and poorly selected fruit put on the market as avocados or alligator pears. Only the best varieties are stamped "Calavo." When that stamp is on it the fruit is guaranteed to have the minimum oil content of eight per cent and to be a good fruit—if not, a good one will be substituted. The result has been that a premium is paid for the calavo on the large eastern markets.

The high nutritive value of the fruit is, of course, the strongest factor contributing to its popularity. A half of a fruit constitutes a meal in itself. It has a delicious flavor, delicate, rich and nutty. It leads all other fruits in mineral and protein content. Recent experiments have

shown it contains vitamins valuable to health.

It is primarily a salad fruit and is best when served with only a little salt and lemon juice or with a sharp French dressing. But there are many delightful combinations with other fruits. It is delicious in ice cream.

New Varieties Sought

A search for new varieties of vegetables as well as bush and tree fruits suited to Wisconsin conditions is being planned. At its recent annual meeting the Wisconsin State Horticultural Society voted to petition the legislature to appropriate a sum of \$5000 to be used under the direction of the horticultural department of the university in research work toward developing new varieties and improving existing varieties of plant life suitable to Wisconsin conditions.

THE CURB MARKET

RATES: Per word, for Classified Advertisements in "agate" type, first line capital letters, 15 cents per word, including name and address. No advertisement accepted as less than 24 words. (Minimum cost \$3.60.) **DISPLAY ADVERTISEMENTS**, of type matter only (no illustrations, trade-marks, etc.) set wholly in our type, \$19.00 per inch, cash with order. No Display Advertisement less than 1-2 inch will be accepted. Maximum size one-fourth page (12 1-2 inches). Orders may be sent direct, or through any recognized advertising agency.

AGENTS WANTED

BIG MONEY DAILY SELLING SHIRTS, TIES, Underwear, Sox, Pajamas, Belts, Professional Uniforms, Raincoats, Coveralls, Pants, Children's Play-suits. Outfit FREE! Experience unnecessary, NIMROD CO., Dept. 162, 4922-28 Lincoln Ave., Chicago.

IF YOU WANT A WONDERFUL OPPORTUNITY to make \$6.00 profit a day steady and get a new Ford Sedan besides, send me your name immediately. No experience necessary. Particulars free. **ALBERT MILLS**, 8997 Monmouth, Cincinnati, O.

BEES

PACKAGE BEES WITH YOUNG LAYING ITALIAN Queens. 2 lbs. \$2.00; 3 lbs. \$2.50. Any number. Orchard pollination packages especially prepared. Satisfaction Guaranteed. **Orterby Apiaries**, Leonville, La.

PACKAGE BEES—IN THIS ISSUE YOU WILL find instructions how to handle package bees. We can furnish them on short notice. 3 two-pound packages of Italian bees with queens \$2.50 each. 100 packages \$2.25. Three, four and five pound packages add 75c per pound extra. **Citronelle Bee Company**, Citronelle, Alabama.

PACKAGE BEES FOR ORCHARD USE. APPLY for prices and description of packages. One of the largest shippers of bees in Louisiana. **Fr. Coulombe Apiaries, Inc.**, Montegut, E. O. La.

CAN FURNISH BEES TO FRUIT GROWERS IN 3 lb. and 5 lb. packages at 50c per lb. If queens wanted 75c additional to each package. Cash with order. **John St. Homain**, Marksville, La.

BEES FOR FRUIT—FIVE POUNDS OF BEES with Queen in Pettit's Orchard Package or Hive will deliver more bees to blossoms per hour than average wintered colonies. Try them. Five Dollars each with liberal quantity discounts. **Merley Pettit**, Albany, Georgia.

SPECIAL FRUIT GROWERS COMBLES ORCHARD package easily handled. No danger getting stung. Shipping cage serves as hive during fruit bloom. No wrapping necessary. Easily fed if need be. Contains five pounds of bees and good queen. Also ship regular packages and nuclei. Write for prices and descriptive circular. **Red Stick Apiaries**, Baton Rouge, La.

SPECIAL DESIGNED ORCHARD PACKAGE. 3 frames brood and adhering bees, 2 extra lbs., bees equal to 5 lbs., \$4.50. Or combless packages, 3 lbs., \$3.50; 4 lbs., \$4.00. May delivery 25c less. **F. O. B. Eldorado.** **Homer W. Richard**, 1411 Champvolle, Eldorado, Ark.

BEES FOR POLLINATION. PACKAGES CON- taining 10,000 to 25,000 workers each. Write us your requirements. We furnish two style packages, one to be used for pollination, and then thrown away, the other to be hived and kept. Any information free on request. **The Storer Apiaries**, Tibbee Station, Miss.

ANY AMOUNT OF 3 BAND ITALIAN BEES in package with young queens. Write for prices. **D. C. Jackson**, Funston, Ga.

BERRY PLANTS

NEW BLAKEMORE STRAWBERRY—THE WONDER berry of them all, highly recommended by the Department of Agriculture. We have pure stock: 25, \$3.50; 50, \$1.10; 100, \$2.00. **Mastodon Everbearing—The greatest** everbearer out. 25, \$1.00; 50, \$1.75; 100, \$3.00. **Great Youngberry—This berry is a cross of Austin Dewberry** and **Loranberry**; has flavor of Red Raspberry; wonderful fruit, makes big yields; clear \$500.00 per acre. **Dosen**, \$2.50; 25, \$4.50; 50, \$6.50; 100, \$10.00. Best buy ever. All post paid. Send for illustrated catalog. **J. A. Bauer**, Lock Box 168, Judsonia, Ark.

DOGS

COON, OPPOSUM, AND RABBIT HOUNDS CHEAP. Long trial, satisfaction guaranteed. **Kentucky Coonhound Kennel**, R121, Kevil, Kentucky.

FARMS WANTED

WANTED—FARMS OR BUSINESS EVERYWHERE. Cash buyers. **National Brokers**, 3513 Lakewood, Detroit, Mich.

WANTED TO HEAR FROM OWNER HAVING FARM or unimproved land for sale. Give cash price. **John Black**, Chippewa Falls, Wis.

HOW TO BEAT HARD TIMES

(From Page 10)

Fruits not only for commercial purposes but for consumption in the home, an opportunity is afforded for canning, preserving, drying, pickling, and processing foods that may be enjoyed throughout the year. By conserving valuable, nutritious, and appetizing horticultural products, the cost of living may be cut down materially; and best of all, ample and wholesome foods in as great quantities as are desired may be obtainable at all times.

It is unfortunate but true that many who are accepting relief at this time did not last year attempt to grow a profitable home garden. Little or no attention was paid to the production of fruits. Moreover, it is true, also, that producers who endeavored to grow good gardens and cared for a fruit plantation properly are as a rule abundantly supplied with foods and are not in need of farm relief.

The main difficulty in many instances is due to the fact that people are generally so constituted that they don't like to think; they don't like to plan ahead. To attempt to grow vegetables and fruits requires thinking, planning, and a real mental effort. It is too much worry, therefore, for the indifferent, procrastinating and negligent. As a result the garden and fruit crops needed for home consumption and ready cash on the markets are often neglected.

Make Every Edge Cut

To beat hard times, producers generally, and the growers of horticultural crops particularly, should endeavor to make every edge cut. They should try to diversify their efforts in production by having not only a good garden and fruit plantation but by making the poultry pay, maintaining hogs in sufficient numbers to give a supply of meat

for the year, and maintaining a dairy of sufficient magnitude to supply milk and butter throughout the year and if possible to have some dairy products to sell.

Again, with such diversified efforts, the producer has to think; and some shrink from this. This is no time for sagging or letting down. Rather it is a time for stiffening up, advancing when others retreat, and of knowing no such words as "fail," "can't," and "give up." When this is done we are likely to move forward and forget about the hard times.

Questions and Comment

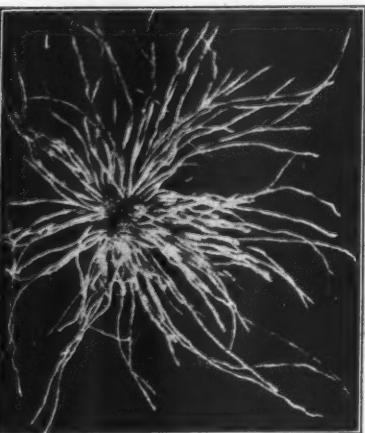
(From Page 14)

pruning will tend to check the growth, sober down the trees, and perhaps cause them to form fruit buds at least for next year (1932) without applications of phosphoric acid or other commercial fertilizers.

Transplanting Asparagus

Am compelled to move 300 Washington asparagus plants three years old. Can I replant them elsewhere, treating them as new plants? Two experienced growers here differ on the question.—F. C., Illinois.

One-year-old asparagus roots are generally preferred to older ones for transplanting. Since it is necessary that you move your asparagus, it is believed that by preparing a wider trench than is usually required, and by exercising care in the removal of the roots, you should



Only first-grade asparagus crowns should be planted. (Courtesy California Agricultural Experiment Station.)

be able to transplant the three-year-old roots successfully. The usual distance between crowns in the row is from 18 to 24 inches. Moreover, crowns are planted at a depth of 10 to 12 inches in peat soil, six to eight inches in sandy loam, and still more shallow in very heavy soil. The soil covering is made from time to time as the shoots grow.

Mendel Pear as Blight-Proof as Any Other

Is the Mendel pear blight-proof, as claimed?

Have been unable to obtain Kainit, the German potash salt, of late. Can you inform me where I can get it?—F. C., Illinois.

The information we have leads us to believe that the Mendel pear is as nearly blight-proof as any varieties with which we are acquainted. Where the blight disease is prevalent, however, no variety is likely to be absolutely blight-proof.

In the control of fire blight, it should be understood that perhaps some of the most important measures consist of: (1) Control of growth, (2) destruction of blight cankers on both pear and apple trees, (3) planting of resistant sorts or varieties, and (4) control of insects, particularly the sucking type, that may be responsible in some way for the spread of the disease.

In all probability you will be able to obtain Kainit, the German potash salt from any of the larger chemical concerns dealing in fertilizers.

Index to Advertisements

The concerns whose advertisements appear listed below are equipped to give prompt and satisfactory service to the American fruit grower. Most of them issue literature that is freely at the disposal of our subscribers. It is to the advantage of all that when writing to an advertiser you use the address exactly as it appears in the advertisement, and that you state in your letter: "I read Your Advertisement in AMERICAN FRUIT GROWER."

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BEES FOR YOUR ORCHARD [From Page 6]

only three frames of bees might not be worth a rental of even \$1 a colony.

In this connection, the orchardist who has his own bees should know that unless his colonies are well protected during the winter, with ample stores to carry them over, they will be too weak at the time the trees are in bloom to do effective work. If he does not know the bee game, he should read up on beekeeping literature or get a competent beekeeper to put his bees in the proper shape for winter.

If the fruit grower has no beekeeper near him, he can buy three pound packages of bees and scatter them over the orchard. He will need about two three-pound packages to the acre of mature trees. The addresses of men who sell bees for orchard work can be secured by consulting the advertising pages of this publication.

The Mistake of Planting Solid Blocks of One Variety

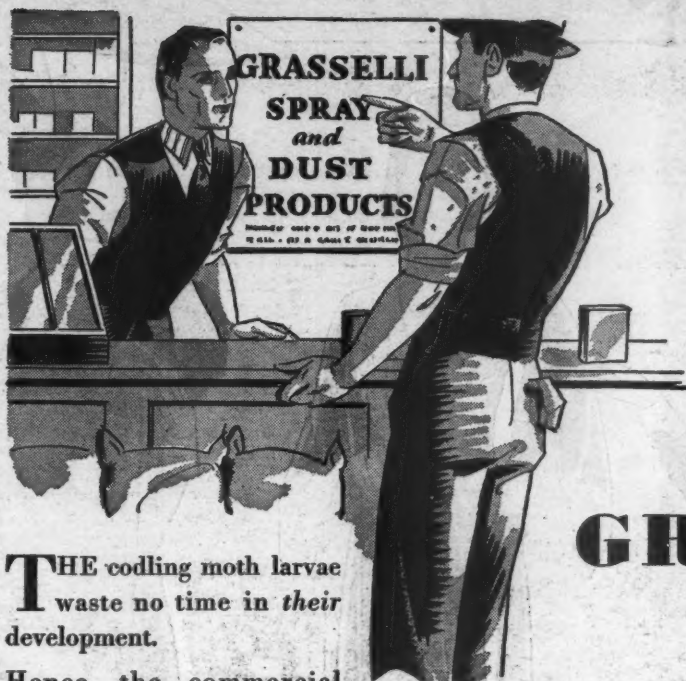
The second and no less important condition to insure proper pollination of the trees is to have mixed plantings of varieties, one or more of which shall be compatible with the rest. The practice of planting solid blocks of one variety, especially if that variety be self-sterile, is a serious mistake. If there are no compatible varieties near, a thousand colonies in the block could not secure results. It has been only within the last few years that experiment stations have shown that many varieties of apples are self-sterile and that many others are partially so.

If, however, the orchard has been set out in solid blocks of self or partially self-sterile varieties, alternate rows or every third row can be top-grafted with twigs from, say, Grimes Golden or Ben Davis or any other variety that your experiment station may name. MacDaniels or Heinicke of Cornell University, New York; Howlette of Wooster Experiment Station, Ohio, or Hootman of State College, Lansing, Mich., are recognized authorities on what varieties to interplant among self-sterile varieties. As varieties vary in the matter of sterility in different localities, it will be well to get in touch with your nearest authority.

For immediate and temporary results, bouquets of blossoms of the compatible varieties can be distributed in tubs or pails here and there in orchards of solid blocks. Experiments in Michigan and New Jersey have shown conclusively that such bouquets have been very effective. In no case should orchardists employ top-grafting or use bouquets without first ascertaining from the nearest experiment station the varieties that should be used for, say, Delicious, Stayman, Winesap or Northern Spy.

The last important requisition for proper pollination is that proper weather conditions prevail while the trees are in bloom. Man, of course, has no control over the weather, but if the temperature is too low or the weather is stormy, bees should not be blamed when they cannot visit the blossoms.

Finally, bees do not sting peaches nor do they cut or bite through the skin of sound fruit with their mandibles or jaws. There is plenty of proof to the contrary. They will suck the juices of over-ripe fruit which has a broken skin or a skin punctured by wasps or birds. Over-ripe fruit or fruit with broken skin has a doubtful market value.



THE codling moth larvae waste no time in their development.

Hence, the commercial grower knows that he must work fast and accurately at that critical spray period when he must cover all the trees in his orchard thoroughly at the ten-days-after-petal-fall application.

For speed, his equipment must have capacity to do the work in a week or less... and for effectiveness of control his "mix" must be right.

D U T O X

A Non-Arsenical Insecticide for controlling beetles and leaf-eating insects... Write us for particulars.

"GIVE ME GRASSELLI LEAD"

is the quickest way to say to your dealer, "I want a sure kill this year for my Calyx"

For any speed or type of power sprayer, GRASSELLI Spray and Dust Materials are textually and chemically right.

Whether you use a stationary spray plant or portable rigs—whether the pest infestations are heavy or light—Grasselli Lead in the tanks, properly

applied... will not only be toxic then, but will help prevent heavy second or third broods of codling moth later.

Specify GRASSELLI Arsenate of Lead... and be certain. For prompt service, there's a Grasselli dealer near you... if not, write us.



THE GRASSELLI CHEMICAL CO., Incorporated, CLEVELAND, O.

GRASSELLI GRADE
A Standard Held High for 92 Years

Arsenate of Lead... Calcium Arsenate... Lime Sulphur... Bordeaux Mixture... Casein Spreader... and a Complete Line of Spray and Dust Mixtures

Let BEES Increase Your Income



EXPERIENCE has shown that colonies of bees properly distributed through the orchard at the right time will increase the "set" of fruit. Doubled, and even trebled, yields are not uncommon, and this slight extra work is in itself a source of profit!

INFORM Yourself about Extra Profit Possibilities

To assist our fruit growing readers in getting dependable information about the possibilities in beekeeping, the necessary steps and the cost to start with bees, we have arranged to make the offer contained in the square to the right.

"Bees and Fruit" treats this important subject from the standpoint of the man whose chief concern is the size and quality of his fruit crop, rather than from the view of the commercial honey-producer. Yet it discloses sources of profit from the beekeeping investment itself.

You can renew or extend your subscription to "THE FRUIT GROWER" for one year, and receive "GLEANINGS" likewise for a year, together with the booklet.

The subject is important to every fruit grower, the information offered is entirely dependable, and the cost is slight—one dollar. Your name and address on the lines below should be sent today to

Get All This for \$1

GLEANINGS IN BEE CULTURE, Monthly. One Year. (New or Renewal)

AMERICAN FRUIT GROWER, One Year. (New or Renewal)

BEES AND FRUIT, By Mail Postpaid.

All for \$1.00

American Fruit Grower, 53 West Jackson Boulevard, Chicago, Ill.

GENTLEMEN: I enclose a dollar. Send AMERICAN FRUIT GROWER and GLEANINGS IN BEE CULTURE both for one year, with the booklet "BEES AND FRUIT," postpaid.

Name _____

Address _____

(If you are now a subscriber to AMERICAN FRUIT GROWER and you wish your subscription extended or renewed, please check here (____))

GLEANINGS IN BEE CULTURE: An illustrated monthly magazine for those interested in bees and beekeeping, and well established as an authoritative journal. Departments: "Talks to Beginners" and Questions and Answers are of especial value to the inexperienced man who desires to get the right start.

BEES AND FRUIT: A concise presentation of beekeeping as an aid to orchard profits. Some of the subjects covered are: Honeybees for the Orchard, Renting Bees, Buying Bees, Package Bees, Purchase of Colonies, Cost of Equipment, Problems of the Fruit Grower-Beekeeper, The Fruit Grower's Apiary, Bees and Fruit, etc., etc.

STYLES



723

656

817

656—A black crepe satin approves of lace collar and cuffs that are so exquisitely dainty for afternoons. A shirred inset marks the tightened hipline. Sizes 36, 38, 40, 42, 44, 46 and 48 inches bust. The 36-inch size requires $3\frac{3}{4}$ yards of 39-inch material with $\frac{1}{2}$ yard of 39-inch contrasting

723—Daring in its color scheme is a bright rose-red faille crepe of smart sports character. The jabot collar is interesting and slimming. Sizes 36, 38, 40, 42, 44, 46 and 48 inches bust. The 36-inch size requires 4 yards of 39-inch material with $\frac{1}{4}$ yard of 39-inch contrasting.

817—A crepe romaine afternoon frock subscribes to Grecian hipline. The soft fulness is held with shirring at either side. It gives height to the figure. Sizes 36, 38, 40, 42, 44 and 46 inches bust. The 36-inch size requires 4 yards of 39-inch material.

BE
OR